

Indiana Department of Transportation

County Jackson

Route State Road 39

Des. No. 1602277

**FHWA-Indiana Environmental Document
CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM
GENERAL PROJECT INFORMATION**

Road No./County:

State Road 39, Jackson County

Designation Number:

1602277

Project Description/Termini:

The project will replace Culvert #039-036-13.45 over unnamed tributary (UNT) to Pond Creek along State Road (SR) 39. The culvert is located 2.14 miles south of SR 250 in Jackson County.

After completing this form, I conclude that this project qualifies for the following type of Categorical Exclusion (FHWA must review/approve if Level 4 CE):

X	Categorical Exclusion, Level 2 – The proposed action meets the criteria for Categorical Exclusion Manual Level 2 - table 1, CE Level Thresholds. Required Signatories: ESM (Environmental Scoping Manager)
	Categorical Exclusion, Level 3 – The proposed action meets the criteria for Categorical Exclusion Manual Level 3 - table 1, CE Level Thresholds. Required Signatories: ESM, ES (Environmental Services Division)
	Categorical Exclusion, Level 4 – The proposed action meets the criteria for Categorical Exclusion Manual Level 4 - table 1, CE Level Thresholds. Required Signatories: ESM, ES, FHWA
	Environmental Assessment (EA) – EAs require a separate FONSI. Additional research and documentation is necessary to determine the effects on the environment. Required Signatories: ES, FHWA

Note: For documents prepared by or for Environmental Services Division, it is not necessary for the ESM of the district in which the project is located to release for public involvement or sign for approval.

Approval

ESM Signature

Date

ES Signature

Date

FHWA Signature

Date

Release for Public Involvement

ESM Initials

Date

ES Initials

Date

Certification of Public Involvement

Office of Public Involvement

Date

Note: Do not approve until after Section 106 public involvement and all other environmental requirements have been satisfied.

INDOT ES/District Env.

Reviewer Signature: _____

Date: _____

Name and Organization of CE/EA Preparer: Bryce Froderman and Brandi Rodriguez, Strand Associates, Inc.

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Project name:

SR 39 over UNT to Pond Creek Culvert Replacement

Date:

April 2, 2020

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Part I - PUBLIC INVOLVEMENT

Every Federal action requires some level of public involvement, providing for early and continuous opportunities throughout the project development process. The level of public involvement should be commensurate with the proposed action.

Does the project have a historic bridge processed under the Historic Bridges PA*? Yes No
If No, then: Opportunity for a Public Hearing Required? X

*A public hearing is required for all historic bridges processed under the Historic Bridges Programmatic Agreement between INDOT, FHWA, SHPO, and the ACHP.

Discuss what public involvement activities (legal notices, letters to affected property owners and residents (i.e. notice of entry), meetings, special purpose meetings, newspaper articles, etc.) have occurred for this project.

Remarks: Notice of Entry letters were mailed to potentially affected property owners near the project area on June 26, 2018 notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix G, page 1. The project will meet the minimum requirements described in the current Indiana Department of Transportation (INDOT) Public Involvement Manual which requires the project sponsor to offer the public an opportunity to submit comment and/or request a public hearing. Therefore, a legal notice will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

Public Controversy on Environmental Grounds Will the project involve substantial controversy concerning community and/or natural resource impacts? Yes No X

Remarks: At this time there is no substantial public controversy concerning impacts to the community or to natural resources.

Part II - General Project Identification, Description, and Design Information

Sponsor of the Project: INDOT INDOT District: Seymour
Local Name of the Facility: SR 39 over UNT to Pond Creek; Culvert #039-036-13.45

Funding Source (mark all that apply): Federal X State X Local Other*

*If other is selected, please identify the funding source:

PURPOSE AND NEED:

Describe the transportation problem that the project will address. The solution to the traffic problem should NOT be discussed in this section. (Refer to the CE Manual, Section IV.B.2. Purpose and Need)

Need: The need for this project is evidenced by the large drift (floating debris) across the west end of the existing structure built in 2016 and the absence of shoulders or sloped embankments along the roadway. The June 22, 2017 Inspection Report noted the shoulder/embankment as rated 4 out of 10 (poor condition), bank erosion as a 4 out of 10 (bank eroded, channel blocked) because of the drift across the west end of the culvert pipes, and overtopping frequency as rated 2 out of 10 (frequent overtopping). Three known off-road accidents have occurred along SR 39 within the project limits from 2015 through 2016.

Purpose: The purpose of this project is to improve the hydraulic efficiency and safety of the stream crossing.

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PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Jackson Municipality: N/A

Limits of Proposed Work: From 425 feet south to 225 feet north of Culvert #039-036-13.45 over UNT to Pond Creek in Brownstown Township, Jackson County

Total Work Length: 0.123 Mile(s) Total Work Area: 0.70 Acre(s)

Is an Interchange Modification Study / Interchange Justification Study (IMS/IJS) required? If yes, when did the FHWA grant a conditional approval for this project?	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 2px;">Yes¹</td> <td style="padding: 2px;">No</td> </tr> <tr> <td style="text-align: center; padding: 2px;"><input type="checkbox"/></td> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td colspan="2" style="padding: 2px;">Date: _____</td> </tr> </table>	Yes ¹	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Date: _____	
Yes ¹	No						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
Date: _____							

¹If an IMS or IJS is required; a copy of the approved CE/EA document must be submitted to the FHWA with a request for final approval of the IMS/IJS.

In the remarks box below, describe existing conditions, provide in detail the scope of work for the project, including the preferred alternative. Include a discussion of logical termini. Discuss any major issues for the project and how the project will improve safety or roadway deficiencies if these are issues.

Location: The project is located in the Brownstown Township in Jackson County, Indiana. The culvert is located on SR 39 over UNT to Pond Creek, approximately 2.14 miles south of SR 250. See Appendix B for project location maps (pages B-1 through B-3) and site photographs (pages B-4 through B-8).

Existing Conditions: The existing structure, Culvert #039-036-13.45, consists of three elliptical, corrugated metal pipes with a 14-foot span and 3-foot rise under 2 feet of roadway fill. The roadway adjacent to the structure does not have an existing shoulder on either side of the roadway and there is a drift across the west (inlet) end of the culvert pipes. The culvert carries SR 39, a Major Collector, over a UNT to Pond Creek. The roadway consists of two 10-foot travel lanes without shoulders on either side of the roadway. The posted speed along the roadway is 55 miles-per-hour (mph). There is no documentation of right-of-way (ROW) within the project area. Apparent ROW is edge of pavement to edge of pavement, approximately 10 feet from the centerline of SR 39. The project area is surrounded predominately by agricultural fields and grass pastures on a relatively flat terrain. There is a forested riparian area located south of the project area along SR 39.

Preferred Alternative: The preferred alternative includes the replacement of the existing culvert pipes with a precast reinforced concrete bridge. The new structure will have a 20-foot span and a rise of 4-foot with a 12" sump, as well as increase the skew of the structure to 30 degrees relative to the roadway to more effectively follow the flow path of the stream channel. The roadway will consist of 2-foot paved and/or unpaved shoulders on either side of the roadway for the length of the project. The roadway profile on either side of the culvert will be raised and include a full depth reconstruction with HMA overlay for a total length of 575 feet. New guardrail will be installed along the eastern edge of the roadway adjacent to the roadside ditch for 450 feet. See Appendix B, starting on page B-9, for relevant plan sheets.

The Maintenance of Traffic (MOT) plan for this project is to close SR 39 and utilize a detour using SR 250, US 31, and SR 256. See the MOT section of this document for additional information.

This alternative has an estimated 2021 construction cost of \$564,000 and a target construction date of Spring 2022. It will require the acquisition of permanent ROW. There are no relocations associated with this alternative.

The preferred alternative will meet the purpose and need outlined in the above section. The preferred alternative will improve the safety of the roadway and improve the hydraulic efficiency of the stream crossing.

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OTHER ALTERNATIVES CONSIDERED:

Describe all discarded alternatives, including the Do-Nothing Alternative and an explanation of why each discarded alternative was not selected.

Single-Span Reinforced Concrete Slab Bridge: This alternative includes the replacement of the existing culvert pipes with a 20-foot single-span reinforced concrete slab bridge on concrete abutments with piling and the installation of new guardrail. This alternative would meet the purpose and need by addressing the safety and hydraulic deficiencies with the existing structure, but this alternative is not preferred because it is not economical to install abutments.

No-Build Alternative: Under the No-Build alternative, no improvements to the existing structure or roadway would occur and the drift would continue to impede the flow through the culvert further eroding the channel and decreasing the hydraulic efficiency of the crossing. With no improvement to the existing shoulders or embankments along the roadway, the existing safety hazards would remain. No-Build alternative was discarded because it would not address the purpose or meet the need of this project.

The Do Nothing Alternative is not feasible, prudent or practicable because (Mark all that apply):

It would not correct existing capacity deficiencies;

It would not correct existing safety hazards;

It would not correct the existing roadway geometric deficiencies;

It would not correct existing deteriorated conditions and maintenance problems; or

It would result in serious impacts to the motoring public and general welfare of the economy.

Other (Describe)

X
X

ROADWAY CHARACTER:

Functional Classification: Major Collector
 Current ADT: 908 VPD (2018) Design Year ADT: 981 VPD (2042)
 Design Hour Volume (DHV): 97 Truck Percentage (%): 14.44
 Designed Speed (mph): 55 Legal Speed (mph): 55

Existing

Proposed

Number of Lanes:	2	2
Type of Lanes:	Non-freeway	Non-freeway
Pavement Width:	10 ft.	10 ft.
Shoulder Width:	0 ft.	2 ft.
Median Width:	0 ft.	0 ft.
Sidewalk Width:	N/A ft.	N/A ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

If the proposed action has multiple roadways, this section should be filled out for each roadway.

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DESIGN CRITERIA FOR BRIDGES:

Structure/NBI Number(s): Existing: CV 039-036-13.45 Sufficiency Rating: N/A
 New: 039-036-10549 (Rating, Source of Information)

	Existing		Proposed
Bridge Type:	N/A		Precast reinforced concrete box
Number of Spans:	N/A		1
Weight Restrictions:	N/A	ton	N/A
Height Restrictions:	N/A	ft.	N/A
Curb to Curb Width:	20	ft.	23.21
Outside to Outside Width:	20	ft.	30.15
Shoulder Width:	0	ft.	2
Length of Channel Work:			297

Describe bridges and structures; provide specific location information for small structures.

Remarks: The project will involve the replacement of the three existing culvert pipes with a precast reinforced concrete box bridge with a span of 20 feet and a rise of 4 feet. The existing culvert pipes were constructed in 2016 and are not eligible for or listed in the National Register of Historic Places (NRHP).

See the table below for a summary of the existing culvert pipes located within the project area.

Existing Pipes	Location	Size (in)	Length (ft.)	Eligible or Listed in NRHP	Proposed Modification
Triple Corrugated Metal Pipe, Elliptical (3)	Sta. 24+08 on plans (Appendix B, Page B-12)	36	36	No	To be replaced with 20-foot, single span bridge
Corrugated Metal Pipe	Sta. 21+70 on plans (Appendix B, Page B-12)	24	40	No	No modification to occur

Yes No N/A

Will the structure be rehabilitated or replaced as part of the project?

If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

Is a temporary bridge proposed?

Is a temporary roadway proposed?

Will the project involve the use of a detour or require a ramp closure? (describe in remarks)

Provisions will be made for access by local traffic and so posted.

Provisions will be made for through-traffic dependent businesses.

Provisions will be made to accommodate any local special events or festivals.

Will the proposed MOT substantially change the environmental consequences of the action?

Is there substantial controversy associated with the proposed method for MOT?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

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Remarks: The MOT for the project will require a full road closure and a detour route will be used during construction. The detour route will use SR 250 to US 31 to SR 256 and will be approximately 25.5 miles of additional travel distance.

The closures/lane restrictions will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated, and all inconveniences will cease upon project completion. Delays may occur during construction but will cease with project completion.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 97,200 (2019) Right-of-Way: \$ 35,000 (2020) Construction: \$ 564,000 (2021)

Anticipated Start Date of Construction: March 2022

Date project incorporated into STIP July 3, 2017

Costs indicated in this section are the costs associated with Des. 1602277, extracted from the bundled costs located in the STIP under lead Des. 1600488 shown in Appendix H.

Is the project in an MPO Area? Yes No

If yes,

Name of MPO _____

Location of Project in TIP _____

Date of incorporation by reference into the STIP _____

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent (reacquisition/new)	Temporary
Residential		
Commercial		
Agricultural	0.29/0.58	
Forest		
Wetlands		
Other:		
Other:		
TOTAL	0.87	

Describe both Permanent and Temporary right-of-way and describe their current use. Typical and Maximum right-of-way widths (existing and proposed) should also be discussed. Any advance acquisition or reacquisition, either known or suspected, and there impacts on the environmental analysis should be discussed.

Remarks: There is no existing ROW along SR 39 for the entire length of the project area.

The project requires approximately 0.87 acre of permanent ROW to the east and west of the roadway for the entire length of the project. 0.29 acre is under pavement and reacquisition of apparent ROW. No temporary ROW will be required as part of the project. The properties to the west consist of pasture areas and are considered agricultural. The properties to the east of SR 39 consist of straight row crop fields and yard grasses. The properties to the east are considered agricultural. The new permanent ROW varies from 25 feet from the centerline of SR 39 at the south project termini to 75 feet from the centerline of SR 39 at 175 feet north of the south project termini to 55 feet from the centerline of SR 39 adjacent to the culvert structure to 25 feet from the centerline of SR 39 at the north end of the project termini.

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If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately.

Part III – Identification and Evaluation of Impacts of the Proposed Action

SECTION A – ECOLOGICAL RESOURCES

	<u>Presence</u>	<u>Impacts</u>	
		<u>Yes</u>	<u>No</u>
Streams, Rivers, Watercourses & Jurisdictional Ditches	X	X	
Federal Wild and Scenic Rivers			
State Natural, Scenic or Recreational Rivers			
Nationwide Rivers Inventory (NRI) listed			
Outstanding Rivers List for Indiana			
Navigable Waterways			

Remarks: Based on a desktop review, a site visit on April 30, 2018 by Strand Associates Inc., the aerial map of the project area (Appendix B, page B-2), and the water resources map in the RFI report (Appendix E, page E-6) there are six streams located within the 0.5 mile search radius. There is one stream, UNT to Pond Creek, present within the project area. The UNT to Pond Creek is not listed as a Federal Wild and Scenic River, a State Natural, Scenic, and Recreational River, an Outstanding River in Indiana, a navigable waterway or on the National River Inventory.

A Waters of the U.S. Determination Report was INDOT Ecology and Waterway Permitting approved on November 7, 2019. Please refer to Appendix F, page F-6 for the Waters of the U.S. Determination Report. It was determined that one unnamed, perennial stream, UNT to Pond Creek, flows through the project area and is considered a jurisdictional “Waters of the U.S.” subject to Federal regulation under the Clean Water Act (CWA). It is also likely a “Waters of the State” subject to state regulation under Indiana Code Title 13. The United States Army corps of engineers (USACE) makes all final determinations regarding jurisdiction.

Approximately 297 linear feet of the UNT to Pond Creek will be permanently impacted by the channel realignment as part of the project. Mitigation, if required, will be determined during permitting.

Early coordination letters were sent to Indiana Department of Environmental Management (IDEM) on October 22, 2019 and Indiana Department of Natural Resources (IDNR) and USACE on June 27, 2019. IDEM and IDNR responded on October 22, 2019 and July 26, 2019 respectively with recommendations to avoid or minimize impacts to the UNT to Pond Creek (Appendix C, pages C-8 through C-10 and pages C-5 through C-7). USACE did not respond to the early coordination letter. All applicable IDEM and IDNR recommendations are included in the Environmental Commitments section of this document.

	<u>Presence</u>	<u>Impacts</u>	
		<u>Yes</u>	<u>No</u>
Other Surface Waters			
Reservoirs			
Lakes			
Farm Ponds			
Detention Basins			
Storm Water Management Facilities			
Other: _____			

Remarks: Based on a desktop review, a site visit on April 30, 2018 by Strand Associates Inc., the aerial map of the project area (Appendix B, page B-2), and the water resources map in the RFI report (Appendix E, page E-6), there is one lake located within the 0.5 mile search radius. No surface waters are present within the project area. Therefore, no impacts are expected.

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Early coordination letters were sent to Indiana Department of Environmental Management (IDEM) on October 22, 2019 and Indiana Department of Natural Resources (IDNR) and USACE on June 27, 2019. IDEM and IDNR responded on October 22, 2019 and July 26, 2019 respectively with recommendations to avoid or minimize impacts to the UNT to Pond Creek (Appendix C, pages C-8 through C-10 and pages C-5 through C-7). USACE did not respond to the early coordination letter. All applicable IDEM and IDNR recommendations are included in the Environmental Commitments section of this document.

	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Wetlands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total wetland area: <u>0.0</u> acre(s)		Total wetland area impacted: <u>0.0</u> acre(s)	

	<u>Documentation</u>	<u>ES Approval Dates</u>
Wetlands (Mark all that apply)		
Wetland Determination	<input checked="" type="checkbox"/>	November 7, 2019
Wetland Delineation	<input type="checkbox"/>	<input type="checkbox"/>
USACE Isolated Waters Determination	<input type="checkbox"/>	<input type="checkbox"/>
Mitigation Plan	<input type="checkbox"/>	<input type="checkbox"/>

Improvements that will not result in any wetland impacts are not practicable because such avoidance would result in (Mark all that apply and explain):

Substantial adverse impacts to adjacent homes, business or other improved properties;	<input type="checkbox"/>
Substantially increased project costs;	<input type="checkbox"/>
Unique engineering, traffic, maintenance, or safety problems;	<input type="checkbox"/>
Substantial adverse social, economic, or environmental impacts, or	<input type="checkbox"/>
The project not meeting the identified needs.	<input type="checkbox"/>

Measures to avoid, minimize, and mitigate wetland impacts need to be discussed in the remarks box.

Remarks: Based on a review of the National Wetlands Inventory (NWI) online mapper (<https://www.fws.gov/wetlands/data/Mapper.html>), a site visit on April 30, 2018 by Strand Associates Inc., the aerial map of the project area (Appendix B, page B-2), and the water resources map in the RFI report (Appendix E, page E-6), five wetlands are located within the 0.5 mile search radius. No wetlands are present within or adjacent to the project area, therefore, no impacts are expected.

A Waters of the U.S. Determination Report was INDOT Ecology and Waterway Permitting office approved on November 7, 2019. Please refer to Appendix F, page F-6 for the Waters of the U.S. Determination Report. It was determined that no wetlands were identified within the project area. One area within the project area classified as a wetland but was considered a feature to the UNT to Pond Creek, thereby not considered a wetland as part of the Determination Report. The USACE makes all final determinations regarding jurisdiction.

Early coordination letters were sent to IDEM and IDNR on October 22, 2019 and June 27, 2019 respectively. IDEM and IDNR responded on October 22, 2019 and July 26, 2019 respectively with recommendations to avoid or minimize impacts to wetlands (Appendix C, pages C-8 through C-10 and pages C-5 through C-7). USACE did not respond to the early coordination letter. All applicable IDEM and IDNR recommendations are included in the Environmental Commitments section of this document.

	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Terrestrial Habitat	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Unique or High Quality Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Use the remarks box to identify each type of habitat and the acres impacted (i.e. forested, grassland, farmland, lawn, etc).

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Remarks: Based on a desktop review, a site visit on April 30, 2018 by Strand Associates Inc., and the aerial map of the project area (Appendix B, page B-2), there are grassed pastures on the upstream side of the structure adjacent to the stream channel, agricultural fields on the downstream side of the structure adjacent to the stream channel, and shrubs and grasses within the stream channel downstream of the structure. Approximately 0.41 acre of terrestrial habitat is within the construction footprint and will be permanently impacted by the project by conversion to maintained ROW. Tree clearing will not be required and vegetation impacted is limited to within the ROW and will be temporary, limited to construction disturbance for equipment access, installation of riprap, ditch realignment, and guardrail installation. No mitigation is anticipated.

Early coordination letters were sent to IDNR and USFWS on June 27, 2019. IDNR and USFWS responded on July 26, 2019 and July 2, 2019 respectively with recommendations to avoid or minimize impacts to fish, wildlife, and botanical resources (Appendix C, pages C-5 through C-7 and C-15 through C-16). All applicable IDNR and USFWS recommendations are included in the Environmental Commitments section of this document.

If there are high incidences of animal movements observed in the project area, or if bridges and other areas appear to be the sole corridor for animal movement, consideration of utilizing wildlife crossings should be taken.

Karst	Yes	No
Is the proposed project located within or adjacent to the potential Karst Area of Indiana?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are karst features located within or adjacent to the footprint of the proposed project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If yes, will the project impact any of these karst features?	<input type="checkbox"/>	<input type="checkbox"/>

Use the remarks box to identify any karst features within the project area. (Karst investigation must comply with the Karst MOU, dated October 13, 1993)

Remarks: Based on a desktop review, a site visit on April 30, 2018 by Strand Associates Inc., the topographic map of the project area (Appendix B, page B-3), and the RFI report (Appendix E, page E-6), the project is located outside the designated karst region of Indiana as outlined in the October 13, 1993 Memorandum of Understanding (MOU). There are no karst features identified within the project area. In the early coordination response, dated June 27, 2019, the Indiana Geological Survey (IGS) did not indicate that karst features may exist in the project area (Appendix C, pages C-11 through C-13). IGS did indicate the project area had high liquefaction potential. No impacts are expected.

	Presence	Impacts	
Threatened or Endangered Species		Yes	No
Within the known range of any federal species	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Any critical habitat identified within project area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Federal species found in project area (based upon informal consultation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State species found in project area (based upon consultation with IDNR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is Section 7 formal consultation required for this action?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Remarks: Based on a desktop review and the RFI report completed by Strand Associates, Inc. on January 17, 2019, the IDNR Jackson County Endangered, Threatened, and Rare (ETR) Species List has been checked and is included in Appendix E, pages E-7 through E-9. The highlighted species on the list reflect the federal and state identified ETR species located within the county. According to the IDNR, Division of Fish and Wildlife (DFW) early coordination response, dated July 26, 2019, (Appendix C, pages C-5 through C-7), the Natural Heritage Program's Database has been checked and to date, no plant or animal species listed as state or federally threatened, endangered, or rare, have been reported to occur in the vicinity of the project area. IDNR DFW provided recommendations to minimize the potential for impacts to fish and wildlife. All applicable IDNR recommendations have been included in the Environmental Commitments for this project.

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Indiana Bat and Northern Long-Eared Bat

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, page C-30 through C-34). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). No additional species were found within or adjacent to the project area other than the Indiana bat and northern long-eared bat.

The project qualifies for the Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB), dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. An effect determination key was completed on October 30, 2019, and based on the responses provided, the project was found to "May Effect - Not Likely to Adversely Affect" the Indiana bat and/or the NLEB (Appendix C, page C-22). INDOT reviewed and verified the effect finding on October 30, 2019 and requested USFWS's review of the finding (Appendix C, page C-19). No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Mitigation Measures (AMMs) are included as firm commitments in the Environmental Commitments section of this document.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act, as amended. If new information on endangered species at the site becomes available, or if project plans are changed, USFWS will be contacted for consultation.

SECTION B – OTHER RESOURCES

Drinking Water Resources

Wellhead Protection Area
Public Water System(s)
Residential Well(s)
Source Water Protection Area(s)
Sole Source Aquifer (SSA)

Presence

Impacts

Yes	No

If a SSA is present, answer the following:

Is the Project in the St. Joseph Aquifer System?
Is the FHWA/EPA SSA MOU Applicable?
Initial Groundwater Assessment Required?
Detailed Groundwater Assessment Required?

Yes	No

Remarks:

The project is located in Jackson County, which is not located within the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana. Therefore, the FHWA/EPA Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project. Therefore a detailed groundwater assessment is not needed and no impacts are expected.

The IDEM Wellhead Proximity Determinator website (<https://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on June 27, 2019 by Strand Associates Inc. This project is not located within a Wellhead Protection Area or Source Water Area. No impacts are expected.

The IDNR Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on November 5, 2019 by Strand Associates Inc. No wells are located near this project. Therefore, no impacts are expected.

Based on a desktop review of the INDOT Municipal Separate Storm Sewer System (MS4) website (<https://entapps.indot.in.gov/MS4/>) by Strand Associates Inc. on November 5, 2019, and the RFI report; this project is not located in an Urban Area Boundary location. No impacts are expected.

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Based on a desktop review, a site visit on April 30, 2018 by Strand Associates Inc., and the aerial map of the project area (Appendix B, page B-2), this project is not located where there will be public water system impacts. Therefore, no impacts are expected.

Flood Plains	Presence	Impacts	
		Yes	No
Longitudinal Encroachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transverse Encroachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project located within a regulated floodplain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Homes located in floodplain within 1000' up/downstream from project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discuss impacts according to classification system described in the "Procedural Manual for Preparing Environmental Studies".

Remarks: The Indiana Department of Natural Resources Indiana Floodway Information Portal website (<http://dnrmmaps.dnr.in.gov/appsphp/fdms/>) was accessed on October 7, 2019 by Strand Associates Inc. This project is not located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, page F-2). Therefore, it does not fall within the guidelines for the implementation of 23 CFR 650, 23 CFR 771, and 44 CFR. No impacts are expected.

Farmland	Presence	Impacts	
		Yes	No
Agricultural Lands	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Prime Farmland (per NRCS)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Total Points (from Section VII of CPA-106/AD-1006* 142

**If 160 or greater, see CE Manual for guidance.*

See CE Manual for guidance to determine which NRCS form is appropriate for your project.

Remarks: Based on a desktop review, a site visit on April 30, 2018 by Strand Associates Inc., the aerial map of the project area (Appendix B, page B-2), the project will convert 0.58 acres of farmland as defined by the Farmland Protection Policy Act. An early coordination letter was sent on June 27, 2019, to Natural Resources Conservation Services (NRCS). Coordination with NRCS resulted in a score of 142 on the *NRCS-AD 1006 Form* (Appendix C, page C-3 and C-4). NRCS's threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Since this project score is less than the threshold, no significant loss of prime, unique, statewide, or local important farmland will result from this project. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

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SECTION C – CULTURAL RESOURCES

	Category	Type	INDOT Approval Dates	N/A
Minor Projects PA Clearance	B	9	December 3, 2019	

Eligible and/or Listed
Resource Present

Results of Research

Archaeology	<input type="checkbox"/>
NRHP Buildings/Site(s)	<input type="checkbox"/>
NRHP District(s)	<input type="checkbox"/>
NRHP Bridge(s)	<input type="checkbox"/>

Project Effect

No Historic Properties Affected No Adverse Effect Adverse Effect

Documentation
Prepared

Documentation (mark all that apply)

		ES/FHWA Approval Date(s)	SHPO Approval Date(s)
Historic Properties Short Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historic Property Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Archaeological Records Check/ Review	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Archaeological Phase Ia Survey Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Archaeological Phase Ic Survey Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Archaeological Phase II Investigation Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Archaeological Phase III Data Recovery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
APE, Eligibility and Effect Determination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
800.11 Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Memorandum of Agreement (MOA) **MOA Signature Dates** (List all signatories)

Describe all efforts to document cultural resources, including a detailed summary of the Section 106 process, using the categories outlined in the remarks box. The completion of the Section 106 process requires that a Legal Notice be published in local newspapers. Please indicate the publication date, name of paper(s) and the comment period deadline. Likewise include any further Section 106 work which must be completed at a later date, such as mitigation or deep trenching.

Remarks: On December 3, 2019, the INDOT Cultural Resource Office (CRO) determined that this project falls within the guidelines of Category B, Type 9 under the Minor Projects Programmatic Agreement, (Appendix D, page D-1). The type of work included within this category involves the replacement of culverts and other drainage structures. An Archaeology Report was completed on November 11, 2019 and was sent to INDOT CRO for review. Based on a review of the Archaeology Report, INDOT CRO determined that no National Register-Listed or potentially National Register-eligible archaeological resources are present within the project area. No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

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SECTION D – SECTION 4(f) RESOURCES/ SECTION 6(f) RESOURCES

Section 4(f) Involvement (mark all that apply)

Parks & Other Recreational Land

- Publicly owned park
- Publicly owned recreation area
- Other (school, state/national forest, bikeway, etc.)

Presence

Use

Yes	No

Evaluations

Prepared

- Programmatic Section 4(f)*
- “De minimis” Impact*
- Individual Section 4(f)

FHWA
Approval date

--

Wildlife & Waterfowl Refuges

- National Wildlife Refuge
- National Natural Landmark
- State Wildlife Area
- State Nature Preserve

Presence

Use

Yes	No

Evaluations

Prepared

- Programmatic Section 4(f)*
- “De minimis” Impact*
- Individual Section 4(f)

FHWA
Approval date

--

Historic Properties

- Sites eligible and/or listed on the NRHP

Presence

--

Use

Yes	No

Evaluations

Prepared

- Programmatic Section 4(f)*
- “De minimis” Impact*
- Individual Section 4(f)

FHWA
Approval Date

**FHWA approval of the environmental document also serves as approval of any Section 4f Programmatic and/or De minimis evaluation(s) discussed below.*

Discuss Programmatic Section 4(f) and “de minimis” Section 4(f) impacts in the remarks box below. Individual Section 4(f) documentation must be separate Draft and Final documents. For further discussions on Programmatic, “de minimis” and Individual Section 4(f) evaluations please refer to the “Procedural Manual for the Preparation of Environmental Studies”. Discuss proposed alternatives that satisfy the requirements of Section 4(f).

Remarks:

Section 4(f) of the U.S. Department of Transportation Act of 1966 prohibits the use of certain public and historic lands for federally funded transportation facilities unless there is no feasible and prudent alternative. The law applies to significant publicly owned parks, recreation areas, wildlife / waterfowl refuges, and NRHP eligible or listed historic properties regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, a site visit on April 30, 2018 by Strand Associates Inc., the aerial map of the project area (Appendix B, page B-2), and the RFI report (Appendix E, page E-5) there are no 4(f) resources located within the 0.5 mile search radius. There are no Section 4(f) resources within or adjacent to the project area. Therefore, no use is expected.

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Section 6(f) Involvement

Presence

Use

Yes

No

Section 6(f) Property

Discuss proposed alternatives that satisfy the requirements of Section 6(f). Discuss any Section 6(f) involvement.

Remarks: The U.S. Land and Water Conservation Fund Act of 1965 established the Land and Water Conservation Fund (LWCF), which was created to preserve, develop, and assure accessibility to outdoor recreation resources. Section 6(f) of this Act prohibits conversion of lands purchased with LWCF monies to a non-recreation use.

A review of 6(f) properties on the Land and Water Conservation Fund (LWCF) website at <https://www.lwcfcoalition.com/tools> revealed a total of one property in Jackson County (Appendix I, page I-1 through I-2). The property is not located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources as a result of this project.

SECTION E – Air Quality

Air Quality

Conformity Status of the Project

Is the project in an air quality non-attainment or maintenance area?

Yes

No

If YES, then:

Is the project in the most current MPO TIP?

Is the project exempt from conformity?

If the project is NOT exempt from conformity, then:

Is the project in the Transportation Plan (TP)?

Is a hot spot analysis required (CO/PM)?

Level of MSAT Analysis required?

Level 1a Level 1b Level 2 Level 3 Level 4 Level 5

Remarks: The FY 2020-2024 STIP is listed based on the lead DES number in the contract. The lead DES number for this contract is 1600488. The FY 2020-2024 STIP includes DES number 1602277 by reference with the contract number B-40488 (Appendix H, page H-1).

This project is located in Jackson County, which is currently in attainment for all criteria pollutants according to IDEM Nonattainment Status for Indiana Counties. Therefore, the conformity procedures of 40 CFR Part 93 do not apply.

This project is of a type qualifying as a categorical exclusion (Group 1) under 23 CFR 771.117(c), or exempt under the Clean Air Act conformity rule under 40 CFR 93.126, and as such, a Mobile Source Air Toxics analysis is not required.

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SECTION F - NOISE

Noise **Yes** **No**
 Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy?

	No	Yes/ Date
ES Review of Noise Analysis	<input type="checkbox"/>	<input type="checkbox"/>

Remarks: This project is a Type III project. In accordance with 23 CFR 772 and the current *Indiana Department of Transportation Traffic Noise Analysis Procedure*, this action does not require a formal noise analysis.

SECTION G – COMMUNITY IMPACTS

	Yes	No
Regional, Community & Neighborhood Factors		
Will the proposed action comply with the local/regional development patterns for the area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will the proposed action result in substantial impacts to community cohesion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the proposed action result in substantial impacts to local tax base or property values?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will construction activities impact community events (festivals, fairs, etc.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the community have an approved transition plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If No, are steps being made to advance the community's transition plan?	<input type="checkbox"/>	<input type="checkbox"/>
Does the project comply with the transition plan? (explain in the remarks box)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Remarks: The project will follow the guidelines of the Americans with Disabilities Act (ADA) Transition Plan for Jackson County, effective May 2015.

There are no pedestrian facilities, existing or proposed, associated with the project. Therefore, no impacts related to the approved transition plan are anticipated.

Indirect and Cumulative Impacts **Yes** **No**
 Will the proposed action result in substantial indirect or cumulative impacts?

Remarks: Indirect impacts are effects which are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate. Cumulative impacts affect the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions.

The proposed culvert replacement project is expected to have neutral impact on the local community and economy as it is not of a type to increase development in the area or cause changes in the traffic pattern. Therefore, it is not expected to have indirect or cumulative impacts in the immediate or extended area.

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Public Facilities & Services

Will the proposed action result in substantial impacts on health and educational facilities, public and private utilities, emergency services, religious institutions, airports, public transportation or pedestrian and bicycle facilities? *Discuss how the maintenance of traffic will affect public facilities and services.*

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Remarks:

Based on a desktop review, a site visit on April 30, 2018 by Strand Associates Inc., the aerial map of the project area (Appendix B, page B-2), and the RFI report (Appendix E, page E-2) there are no public facilities adjacent to the project area. Access to all properties will be maintained during construction. Therefore, no substantial impacts are expected.

Temporary disruption of emergency services and school bus routes will occur as the project will require the closure of the roadway during construction. Access to all properties will be maintained during construction. Delays may occur during construction but will cease with project completion.

It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access.

Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

Yes	No
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	-------------------------------------

Will the project result in adversely high or disproportionate impacts to EJ populations?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	-------------------------------------

Remarks:

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent ROW. The project will require the reacquisition of 0.29 acre of apparent ROW under pavement and the new acquisition of 0.58 acre of permanent ROW on either side of the roadway. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exists and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city or town and is called the community of comparison (COC). In this project, the COC is Jackson County. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 9682. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from Jackson County was obtained from the US Census Bureau Website, <https://factfinder.census.gov/> on January 29, 2020 by Strand Associates, Inc. Data from Census Tract 9682 was obtained from the US Census Bureau Website, https://factfinder.census.gov on January 29, 2020 by Strand Associates, Inc. The data collected for minority and low-income populations within the AC are summarized in the below table.

	COC - Jackson County	AC-1 - Census Tract 9682, Jackson County, Indiana
Percent Minority	8.0	2.7
125% of COC	10.0	AC < 125% COC
EJ Population of Concern		No
Percent Low-Income	15.6	12.0
125% of COC	19.4	AC < 125% COC
EJ Population of Concern		No

AC-1, Census Tract 9682 has a percent minority of 2.7 which is below 50% and is below the 125% COC threshold. Therefore, AC-1 does not contain minority populations of EJ concern.

AC-1, Census Tract 9682 has a percent low-income of 12.0 which is below 50% and is below the 125% COC threshold. Therefore, AC-1 does not contain low-income populations of EJ concern.

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Conclusion:
The census data sheets, map, and calculations can be found in Appendix I, pages I-3 through I-10. No further environmental justice analysis is warranted.

Relocation of People, Businesses or Farms

Will the proposed action result in the relocation of people, businesses or farms?
Is a Business Information Survey (BIS) required?
Is a Conceptual Stage Relocation Study (CSRS) required?
Has utility relocation coordination been initiated for this project?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Number of relocations: Residences: _____ Businesses: _____ Farms: _____ Other: _____

If a BIS or CSRS is required, discuss the results in the remarks box.

Remarks: No relocations of people, businesses, or farms will take place as a result of this project.

SECTION H – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Documentation

Hazardous Materials & Regulated Substances (Mark all that apply)

Red Flag Investigation X
Phase I Environmental Site Assessment (Phase I ESA)
Phase II Environmental Site Assessment (Phase II ESA)
Design/Specifications for Remediation required?

	No	Yes/ Date
ES Review of Investigations	<input type="checkbox"/>	January 17, 2019

Incl de a summary of findings for each investigation.

Remarks: Based on a review of geographic information system (GIS) and available public records, an RFI was approved on January 17, 2019 by INDOT Environmental Services (Appendix E, page E-1). No sites with hazardous material concerns (hazmat sites) or sites involved with regulated substances were identified in or within the 0.5 mile search radius of the project area. Further investigation for hazardous material concerns or regulated substances is not required at this time.

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SECTION I – PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

Individual Permit (IP)	<input type="checkbox"/>
Nationwide Permit (NWP)	<input type="checkbox"/>
Regional General Permit (RGP)	<input checked="" type="checkbox"/>
Pre-Construction Notification (PCN)	<input type="checkbox"/>
Other	<input type="checkbox"/>
Wetland Mitigation required	<input type="checkbox"/>
Stream Mitigation required	<input type="checkbox"/>

IDEM

Section 401 WQC	<input checked="" type="checkbox"/>
Isolated Wetlands determination	<input type="checkbox"/>
Rule 5	<input type="checkbox"/>
Other	<input type="checkbox"/>
Wetland Mitigation required	<input type="checkbox"/>
Stream Mitigation required	<input type="checkbox"/>

IDNR

Construction in a Floodway	<input type="checkbox"/>
Navigable Waterway Permit	<input type="checkbox"/>
Lake Preservation Permit	<input type="checkbox"/>
Other	<input type="checkbox"/>
Mitigation Required	<input type="checkbox"/>

US Coast Guard Section 9 Bridge Permit

Others (Please discuss in the remarks box below)

<input type="checkbox"/>

Remarks:

An IDEM, Section 401 Water Quality Certification (WQC) General Permit and a USACE, Section 404 Clean Water Act Regional General Permit are anticipated for the project.

It is anticipated that this project qualifies for a CIF exemption under IC 14-28-1 Section 22.

Applicable recommendations provided by IDEM and USACE are included in the Environmental Commitments section of this document. If a permit is found to be necessary, the conditions of the permit will be requirements of the project and will supersede these recommendations. It is the responsibility of the project sponsor to identify and obtain all required permits.

SECTION J- ENVIRONMENTAL COMMITMENTS

The following information should be provided below: List all commitments, name of agency/organization requesting the commitment(s), and indicating which are firm and which are for further consideration. The commitments should be numbered.

Remarks:

Firm:

1. If the scope of work or permanent or temporary right-of-way amounts change, the INDOT ESD and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT District)
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction activity that would block or limit access. (INDOT ESD)
3. USFWS Bridge/Structure Assessment shall take place no earlier than two (2) years prior to the start of construction. If construction will begin after August 1, 2021, an inspection of the structure by a qualified individual, must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. (INDOT ESD)

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4. Any work in a wetland area within right-of-way or in borrow/waste areas is prohibited unless specifically allowed in the U.S. Army Corps of Engineers permit. (INDOT ESD)
5. General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
6. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)

For Further Consideration:

1. If box or pipe culverts are used, the bottoms should be buried a minimum of 6" (or 20% of the culvert height/pipe diameter, whichever is greater up to a maximum of 2') below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossings should: span the entire channel width (a minimum of 1.2 times the OHWM width); maintain the natural stream substrate within the structure; have a minimum openness ratio (height x width/length) of 0.25' and have stream depth, channel width, and water velocities during low-flow conditions that are approximate to those in the natural stream channel. (IDNR)
2. Any riprap placed at the culvert's outlet should match the outlet/invert elevation at the upstream edge of the riprap apron; should be mixed with smaller stone and fines to match the existing stream substrate particle distribution and provide impermeability of the riprap apron/substrate so the flow doesn't percolate through the voids below the riprap apron's surface and the slope of the riprap should be no steeper than 20:1 from the lip of the culvert pipe to the streambed. Riprap on the inlet side should have a slope no steeper than 5:1. (IDNR)
3. Minimize the use of riprap for bank stabilization and use alternative erosion protection materials whenever possible. Riprap must not be placed in the active thalweg channel or placed in the streambed in a manner that precludes fish or aquatic organism passage (riprap must not be placed above the existing streambed elevation). Where riprap must be used, we recommend placing only enough riprap to provide stream bank toe protection, such as from the toe of the bank up to the ordinary high water mark (OHWM). The banks above the OHWM must be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to the area and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion. (IDNR)
4. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure. (IDNR)
5. Do not construct any temporary runarounds, access bridges, casuseways, cofferdams, diversions, or pumparounds. (IDNR)
6. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organism in the voids. (IDNR)
7. Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap. (USFWS)
8. Culverts should span the active stream channel, should be either embedded or a 3-sided or open-arch culvert, and be installed where practicable on an essentially flat slope. When an open-bottomed culvert or arch is used in a stream, which has a good natural bottom substrate, such as gravel, cobbles and boulders, the existing substrate should be left undisturbed beneath the culvert to provide natural habitat for the aquatic community. (USFWS)
9. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat. (USFWS)
10. Avoid all work within the inundated part of the stream channel (in perennial streams and larger intermittent streams) during the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season. No equipment shall be operated below Ordinary High Water Mark during this time unless the machinery is within the caissons or on the cofferdams. (USFWS)

This is page 19 of 20 Project name: SR 39 over UNT to Pond Creek Culvert Replacement Date: April 2, 2020

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11. Evaluate wildlife crossings under bridge/culvert projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing. (USFWS)

SECTION K- EARLY COORDINATION

Please list the date coordination was sent and all agencies that were contacted as a part of the development of this Environmental Study. Also, include the date of their response or indicate that no response was received. INDOT and FHWA are automatically considered early coordination participants and should only be listed if a response is received.

Remarks:

AGENCY	DATE MATERIALS SENT	DATE OF RESPONSE
U.S. Fish and Wildlife Service	June 27, 2019	July 2, 2019
Natural Resources Conservation Service	June 27, 2019	July 2, 2019
Indiana Geological Survey	June 27, 2019	June 27, 2019
IDNR Division of Fish and Wildlife	June 27, 2019	July 26, 2019
U.S. Department of Housing and Urban Development	June 27, 2019	No response
IDEM Automated Response	October 22, 2019	October 22, 2019
IDEM Wellhead Proximity Determinator Website	June 27, 2019	June 27, 2019
Army corps of Engineers, Louisville District	June 27, 2019	No response
U.S. Eighth Coast Guard District	June 27, 2019	July 9, 2019
National Park Service	June 27, 2019	No response

**Culvert Project
SR 39 over UNT to Pond Creek (DES. NO. 1602277)**

Page No.
or Following

CE DOCUMENT FORM 1

APPENDIX A - INDOT SUPPORTING DOCUMENTATION

Threshold Chart A-1

APPENDIX B - GRAPHICS

Project Location Map B-1

Topographic Map B-2

Aerial Map B-3

Site Photographs B-4

Project Plans..... B-9

APPENDIX C - EARLY COORDINATION

Copy of Early Coordination Letter C-1

NRCS Early Coordination Response C-3

IDNR Early Coordination Response C-5

IDEM Roadway Letter C-8

IGS Early Coordination Response C-11

INDOT Early Coordination Response C-14

USFWS Early Coordination Response C-15

Bat Inspection Assessment Form C-17

IPaC Concurrence Verification Letter C-19

IPaC Official Species List C-30

U.S. Coast Guard Response C-35

APPENDIX D - SECTION 106 OF THE NHPA

MPPA Assessment Form D-1

APPENDIX E - RED FLAG AND HAZARDOUS MATERIALS

Red Flag Investigation Report E-1

Jackson County ETR Species List E-7

APPENDIX F - WATER RESOURCES

Floodplain Insurance Rate Map F-1

IDNR Indiana Floodplain Information Portal Map F-2

Waters Report Approval Email F-3

Waters Report F-6

Wetland Determination Forms..... F-29

APPENDIX G - PUBLIC INVOLVEMENT

Notice of Entry Sample LetterG-1
List of Individuals Receiving Notice of Entry LetterG-2
Legal Notice and Publisher’s NoticeG-3

APPENDIX H - AIR QUALITY

STIP Project Listing..... H-1

APPENDIX I - ADDITIONAL STUDIES

LWCF Project ListI-1
EJ Analysis COC and AC Area MapI-3
EJ Analysis Census Data SheetsI-4
EJ Analysis Excel SpreadsheetI-10

Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4 ¹
Section 106	Falls within guidelines of Minor Projects PA	“No Historic Properties Affected”	“No Adverse Effect”	-	“Adverse Effect” Or Historic Bridge involvement ²
Stream Impacts	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	Individual 404 Permit
Wetland Impacts	No adverse impacts to wetlands	< 0.1 acre	-	< 1 acre	≥ 1 acre
Right-of-way³	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)	“No Effect”, “Not likely to Adversely Affect” (Without AMMs ⁴ or with AMMs required for all projects ⁵)	“Not likely to Adversely Affect” (With any other AMMs)	-	“Likely to Adversely Affect”	Project does not fall under Species Specific Programmatic
Threatened/Endangered Species (Any other species)	Falls within guidelines of USFWS 2013 Interim Policy	“No Effect”, “Not likely to Adversely Affect”	-	-	“Likely to Adversely Affect”
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential ⁶
Sole Source Aquifer	Detailed Assessment Not Required	-	-	-	Detailed Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Coastal Zone Consistency	Consistent	-	-	-	Not Consistent
National Wild and Scenic River	Not Present	-	-	-	Present
New Alignment	None	-	-	-	Any
Section 4(f) Impacts	None	-	-	-	Any
Section 6(f) Impacts	None	-	-	-	Any
Added Through Lane	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Coast Guard Permit	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes ⁷
Approval Level	Concurrence by INDOT District Environmental or Environmental Services	Yes	Yes	Yes	Yes
<ul style="list-style-type: none"> • District Env. Supervisor • Env. Services Division • FHWA 				Yes	Yes

¹Coordinate with INDOT Environmental Services. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.

²Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.

³Permanent and/or temporary right-of-way.

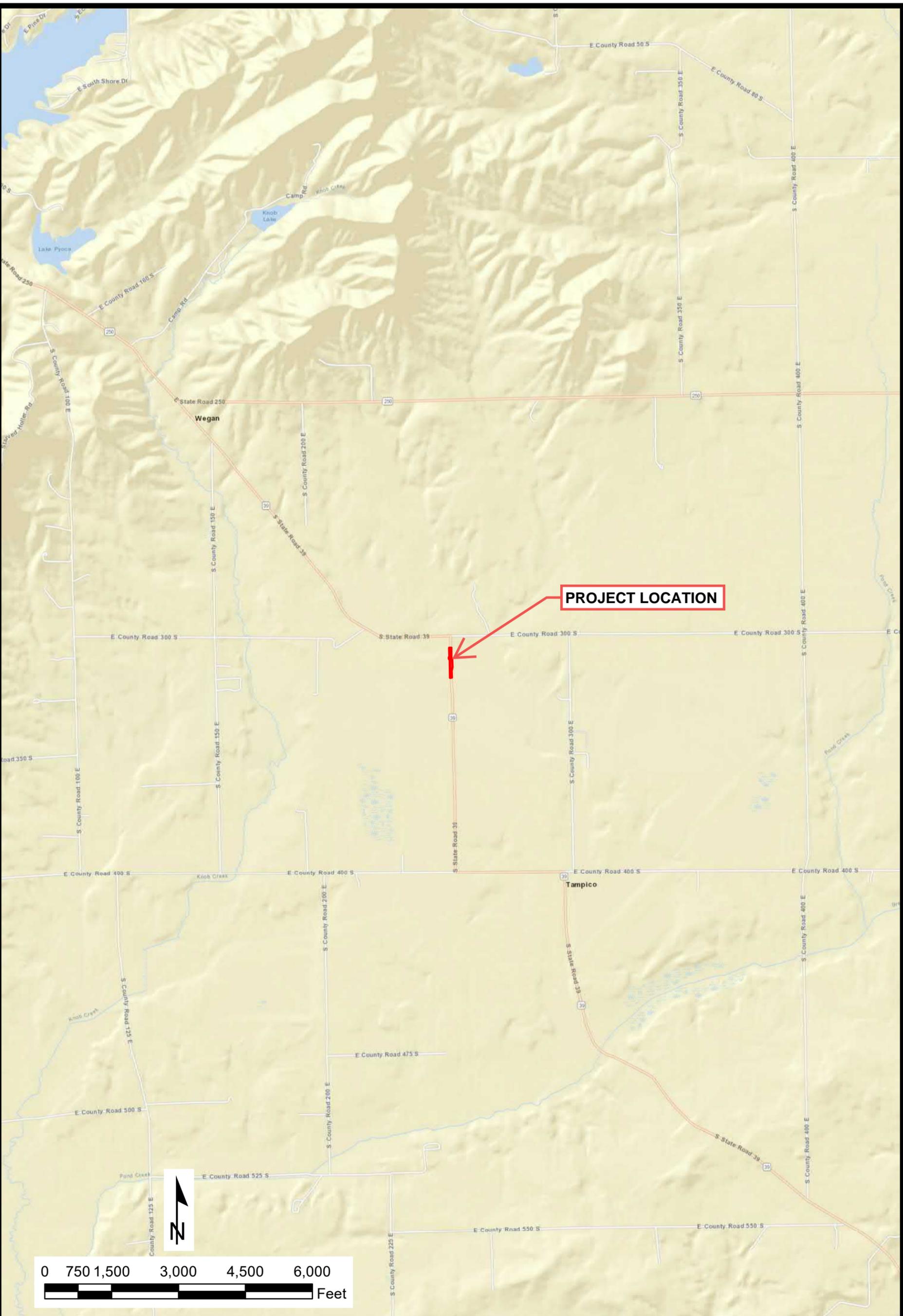
⁴AMMs = Avoidance and Mitigation Measures.

⁵AMMs determined by the IPAC decision key to be needed that are listed in the USFWS *User's Guide for the Range-wide Programmatic Consultation for Indiana bat and Northern long-eared bat* as “required for all projects”.

⁶Potential for causing a disproportionately high and adverse impact.

⁷Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.

*Substantial public or agency controversy may require a higher-level NEPA document.



PROJECT LOCATION

**CULVERT PROJECT
PROJECT LOCATION MAP**

**DES. 1602277
S.R. 39 OVER UNT TO POND CREEK
JACKSON COUNTY, INDIANA**



FIGURE 1

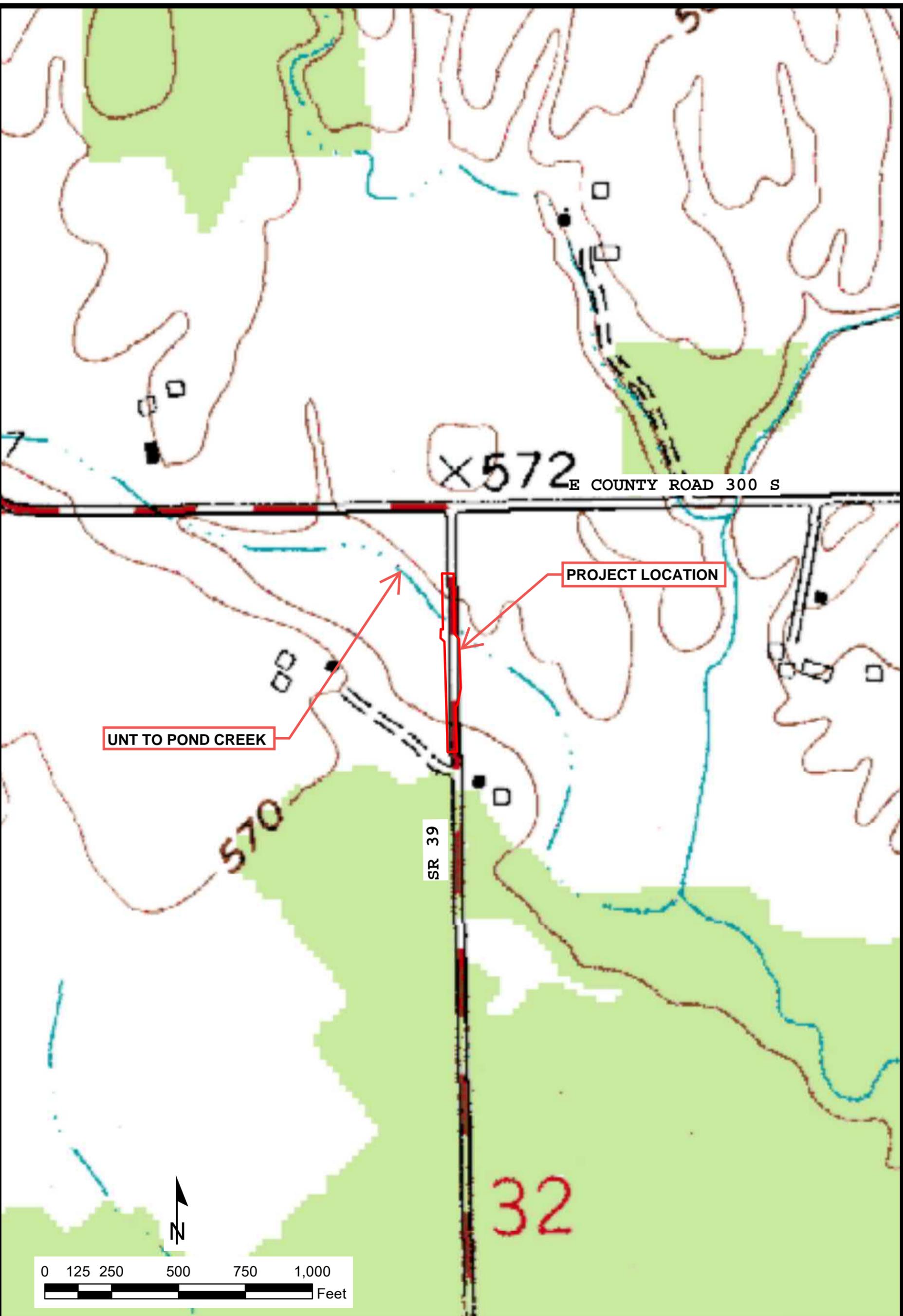


**CULVERT PROJECT
AERIAL PHOTOGRAPHY MAP**

**DES. 1602277
S.R. 39 OVER UNT TO POND CREEK
JACKSON COUNTY, INDIANA**



FIGURE 2



**CULVERT PROJECT
QUAD MAP**

**DES. 1602277
S.R. 39 OVER UNT TO POND CREEK
JACKSON COUNTY, INDIANA**



FIGURE 3



**CULVERT PROJECT
PHOTOGRAPH MAP**

**DES. 1602277
S.R. 39 OVER UNT TO POND CREEK
JACKSON COUNTY, INDIANA**



FIGURE 4

Date: April 30, 2018

Time: 1:00 P.M.

Description:

Looking at the east end of the structure.



Date: April 30, 2018

Time: 1:00 P.M.

Description:

Looking south along the right pavement ledge of the south bound lane. Overhead power lines along roadway.



APPENDIX B

**SR 39 OVER UNT POND CREEK
DES. NO. 1602277
INDIANA DEPARTMENT OF TRANSPORTATION
JACKSON COUNTY, INDIANA
SITE PHOTOGRAPHS**

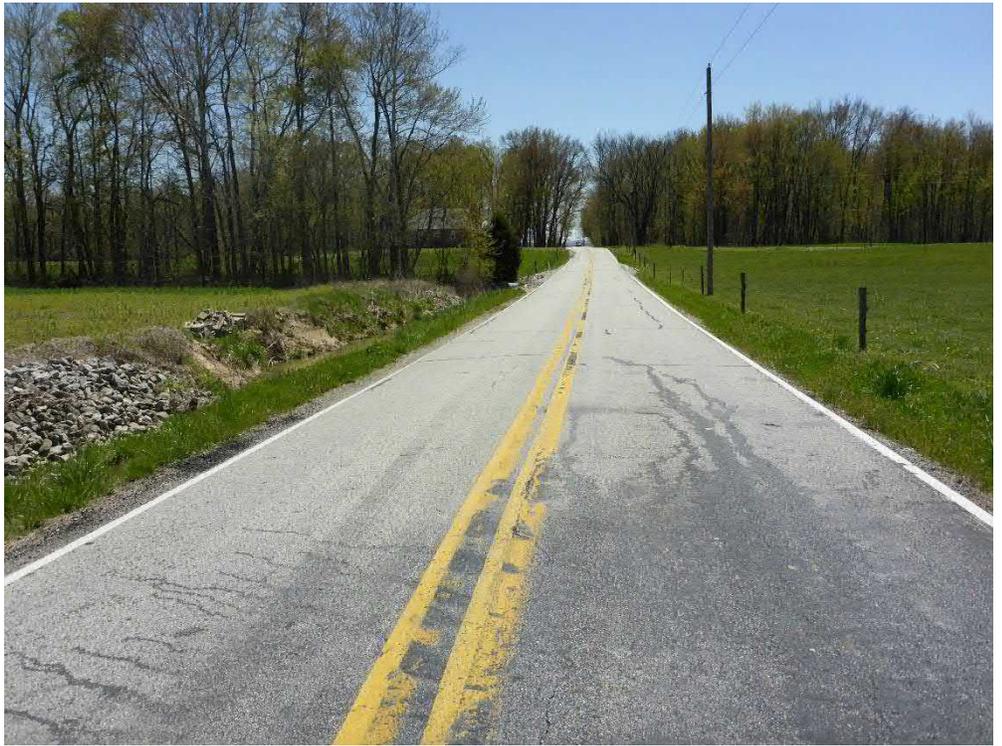


Date: April 30, 2018

Time: 1:00 P.M.

Description:

Looking south along the centerline of the roadway.

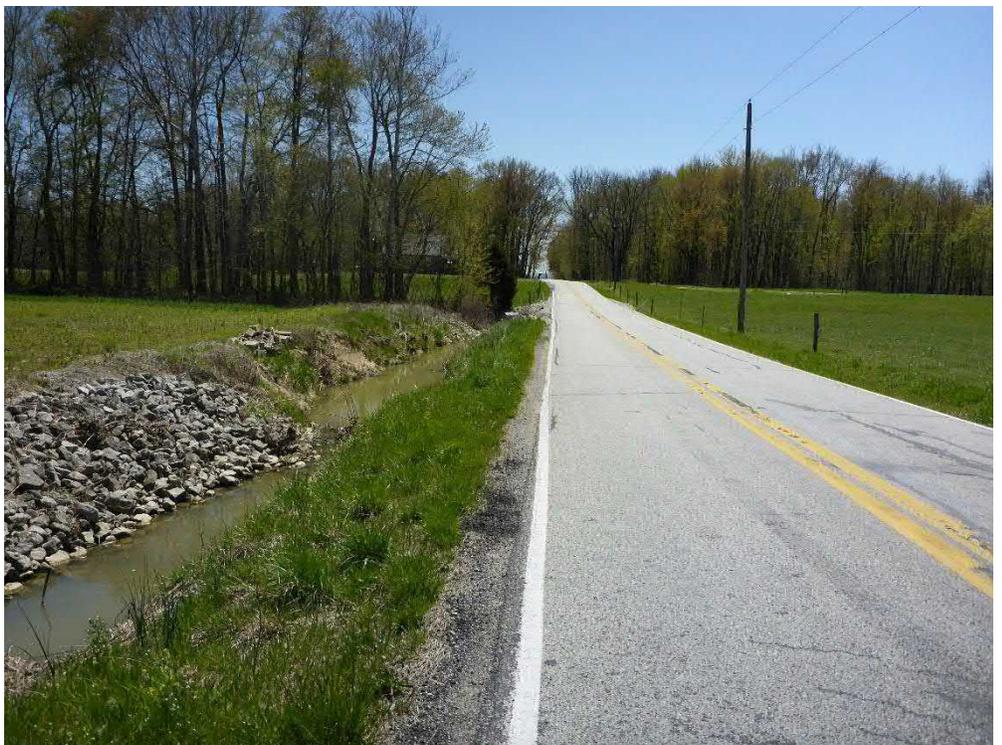


Date: April 30, 2018

Time: 1:00 P.M.

Description:

Looking south along the right pavement edge of the north bound lane.



APPENDIX B

**SR 39 OVER UNT POND CREEK
DES. NO. 1602277
INDIANA DEPARTMENT OF TRANSPORTATION
JACKSON COUNTY, INDIANA
SITE PHOTOGRAPHS**



Date: April 30, 2018

Time: 1:00 P.M.

Description:

Looking north along the right pavement edge of the south bound lane. Overhead power lines along the roadway.

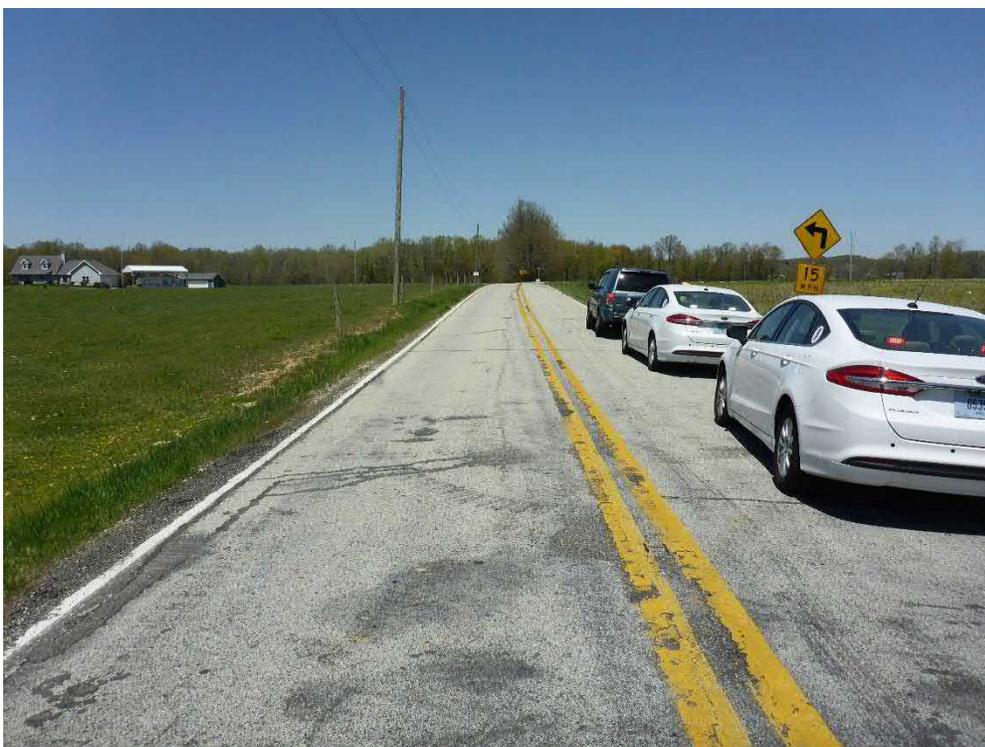


Date: April 30, 2018

Time: 1:00 P.M.

Description:

Looking north along the centerline of the roadway.



APPENDIX B

**SR 39 OVER UNT POND CREEK
DES. NO. 1602277
INDIANA DEPARTMENT OF TRANSPORTATION
JACKSON COUNTY, INDIANA
SITE PHOTOGRAPHS**



Date: April 30, 2018

Time: 1:00 P.M.

Description:

Looking at the west end of the structure. Drift in pipes shown.



APPENDIX B

**SR 39 OVER UNT POND CREEK
DES. NO. 1602277
INDIANA DEPARTMENT OF TRANSPORTATION
JACKSON COUNTY, INDIANA
SITE PHOTOGRAPHS**



PROJECT	DESIGNATION
	1602277
CONTRACT	BRIDGE FILE
B-40488	039-36-10549

STRUCTURE INFORMATION				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
039-36-10549	Small Structure Replacement	Spans: 23'-1", Skew: 30° Rt.	Unnamed Tributary to Pond Creek	13+45 Line "B"

KIN PROJECT INFORMATION	
DESIGNATION	PROJECT DESCRIPTION
1701511	Superstructure Replacement
1701503	Superstructure Replacement
1600448	Superstructure Replacement
1593084	Bridge Deck Overlay

INDIANA DEPARTMENT OF TRANSPORTATION



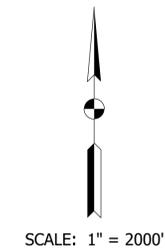
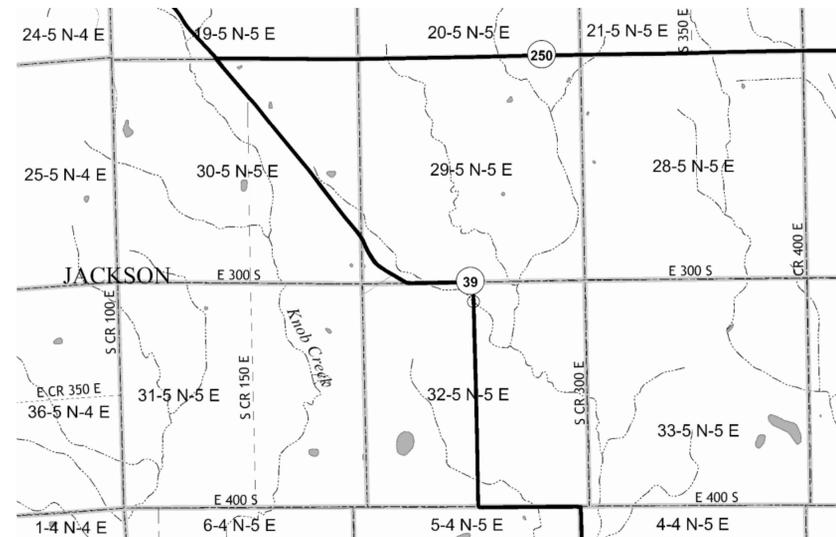
BRIDGE PLANS

FOR SPANS OVER 20 FEET

ROUTE: SR 39 AT: RP 13+45

PROJECT NO. 1602277 P.E.
1602277 R/W
1602277 CONST.

Small Structure Replacement on SR 39 over UNT to Pond Creek
Located 2.14 Miles South of SR 250
Section 32, T-5-N, R-5-W, Brownstown Township, Jackson County, Indiana



TRAFFIC DATA		
A.A.D.T. (2022)		920 V.P.D.
A.A.D.T. (2042)		981 V.P.D.
D.H.V (2042)		97 V.P.H.
DIRECTIONAL DISTRIBUTION		46.92 %
TRUCKS		11.56 % A.A.D.T. 14.44 % D.H.V.

DESIGN DATA	
DESIGN SPEED	55 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	STATE COLLECTOR
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE



LATITUDE: N 38°50'13" LONGITUDE: W 85°59'21"

BRIDGE LENGTH:	0.0038	MI.
ROADWAY LENGTH:	0.1083	MI.
TOTAL LENGTH:	0.1121	MI.
MAX. GRADE:		%

POND CREEK - UPPER
11 DIGIT HUC: 05120207110
14 DIGIT HUC: 05120207110020

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2020
TO BE USED WITH THESE PLANS.

PLANS PREPARED BY: MATTHEW R. STARKEY
CERTIFIED BY: _____
RECOMMENDED FOR LETTING: _____
INDIANA DEPARTMENT OF TRANSPORTATION

BRIDGE FILE	
DESIGNATION	
1602277	
SHEETS	
SURVEY BOOK	1 of 12
PROJECT	
CONTRACT	
B-40488	

Plot: 8/5/2019 4:31 PM

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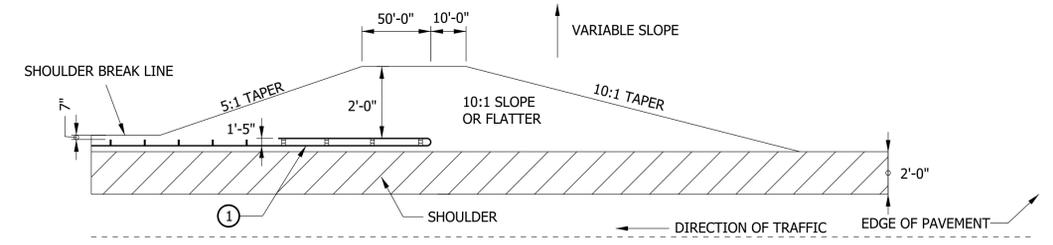
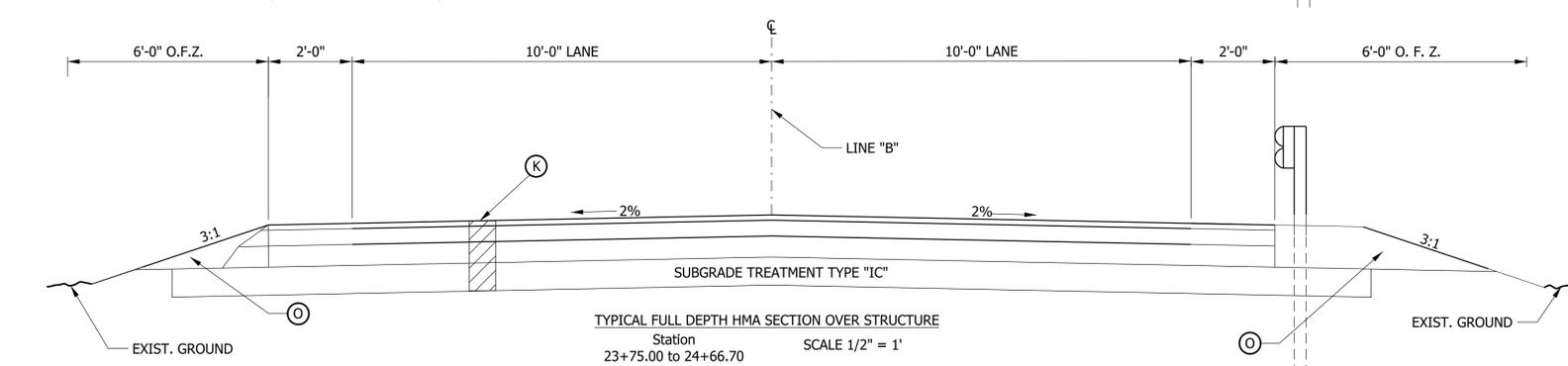
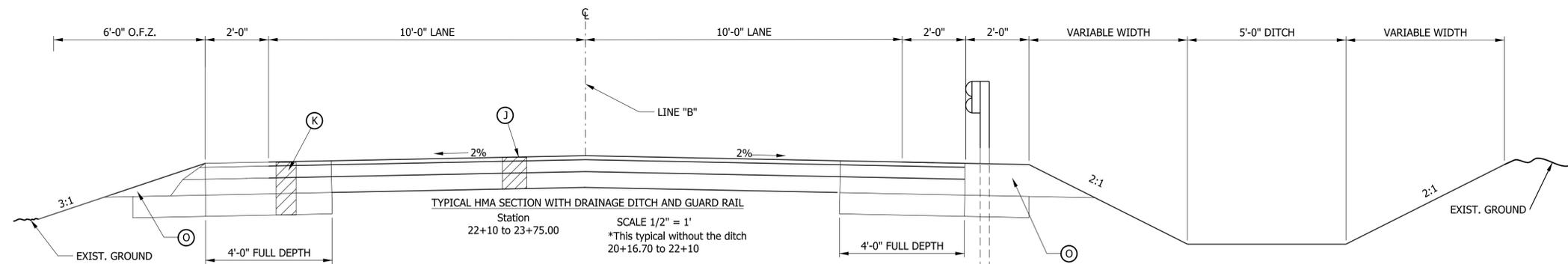
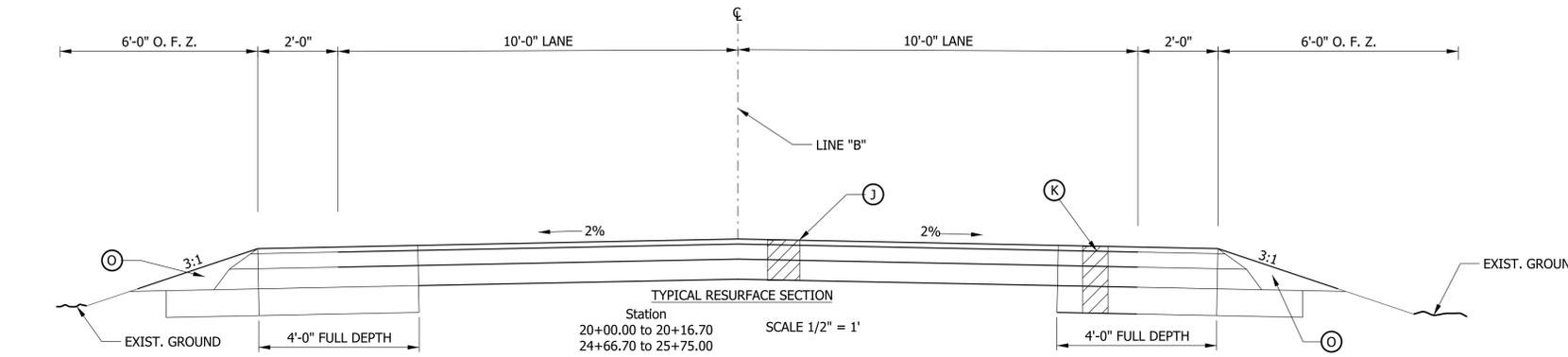
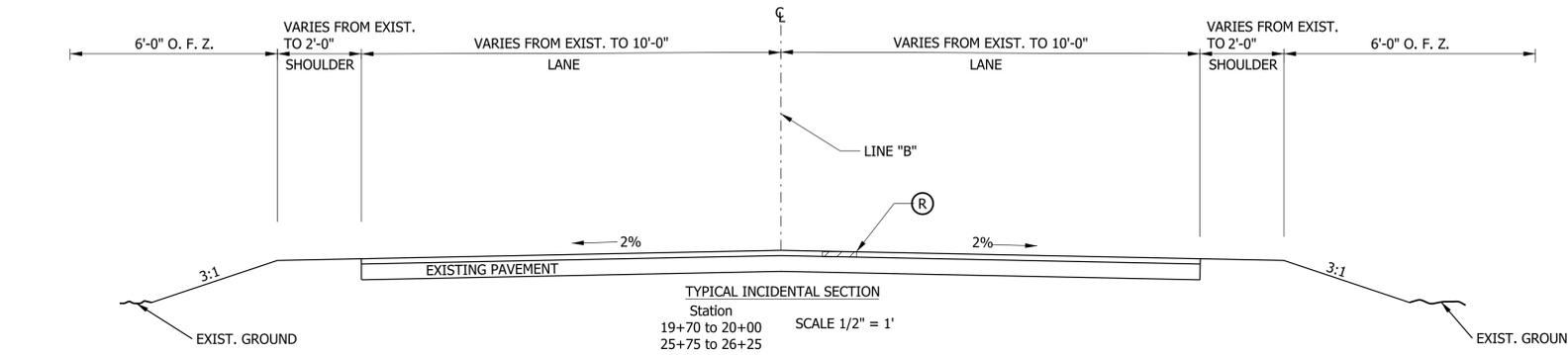
Estimated Pavment
(Actual Pavment Design has not been done yet)

NOTES

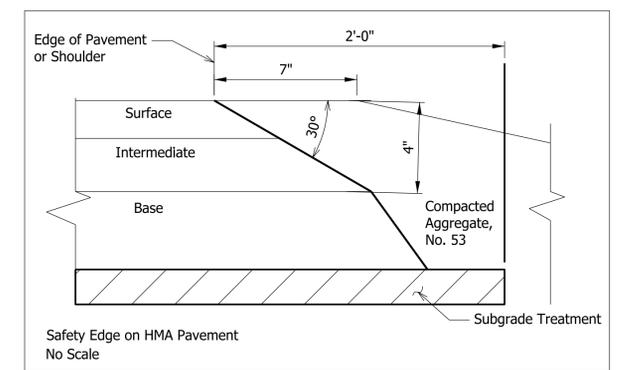
- ① Length and width of OS Unit Test Level 3 (TL-3)
Length = 50'-0"
Shoulder Width = 2'-0"

LEGEND

- Ⓚ HMA FULL DEPTH PAVEMENT
165#Syd. QC/QA-HMA, 3, 64, Surface 9.5 mm on 275#Syd. QC/QA-HMA, 2, 64, Intermediate 19.0 mm on 660#Syd. QC/QA-HMA, 2, 64, Base 19.0 mm on (in 2 Lifts) Subgrade Treatment Type IC
- Ⓜ 165#Syd. QC/QA-HMA, 3, 64, Surface 9.5 mm on 275#Syd. QC/QA-HMA, 2, 64, Intermediate 19.0 mm on Variable depth base
- Ⓡ HMA RESURFACE/SURFACE MILLING
165#Syd. QC/QA-HMA, 3, 64, Surface 9.5 mm on 1 1/2" Milling, Asphalt
- Ⓞ Compacted Aggregate, No. 53



PLAN VIEW
GRADING DETAIL FOR GUARDRAIL END TREATMENT TYPE OS
NO SCALE



Safety Edge on HMA Pavement
No Scale

Plot: 8/5/2019 4:32 PM

DATE	REVISION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MRS	07/23/19	DRAWN: MRS
CHECKED: JPT	07/23/19	CHECKED: JPT

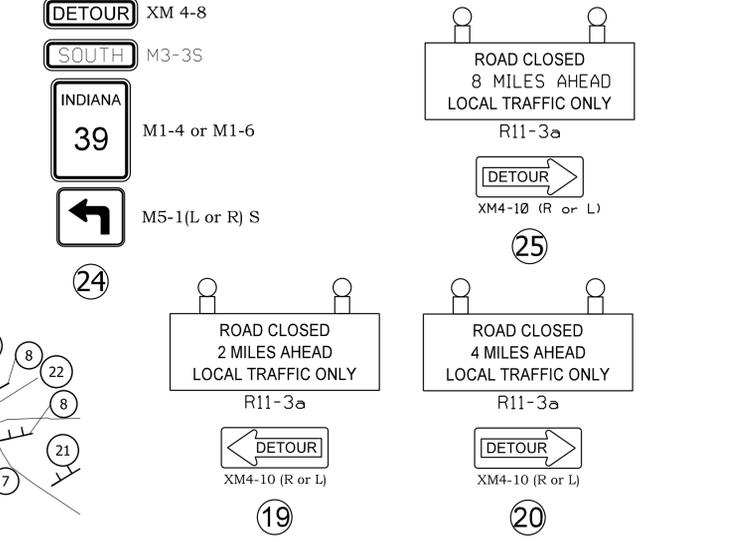
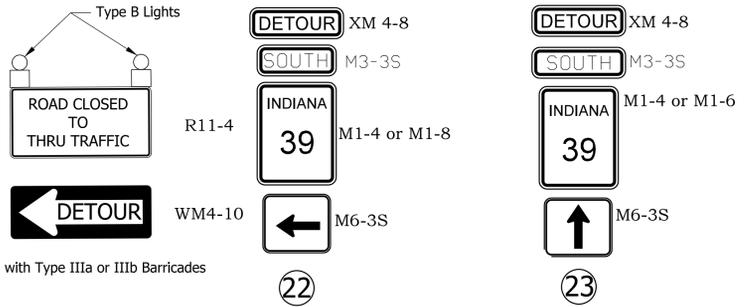
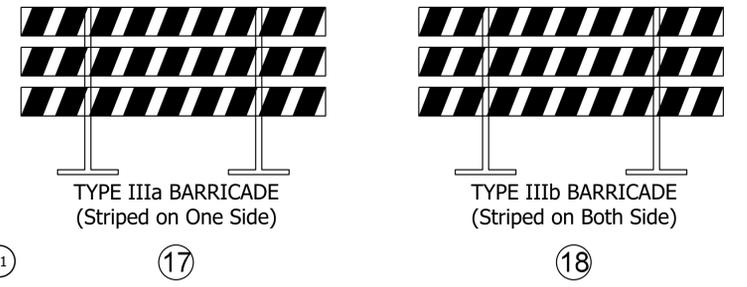
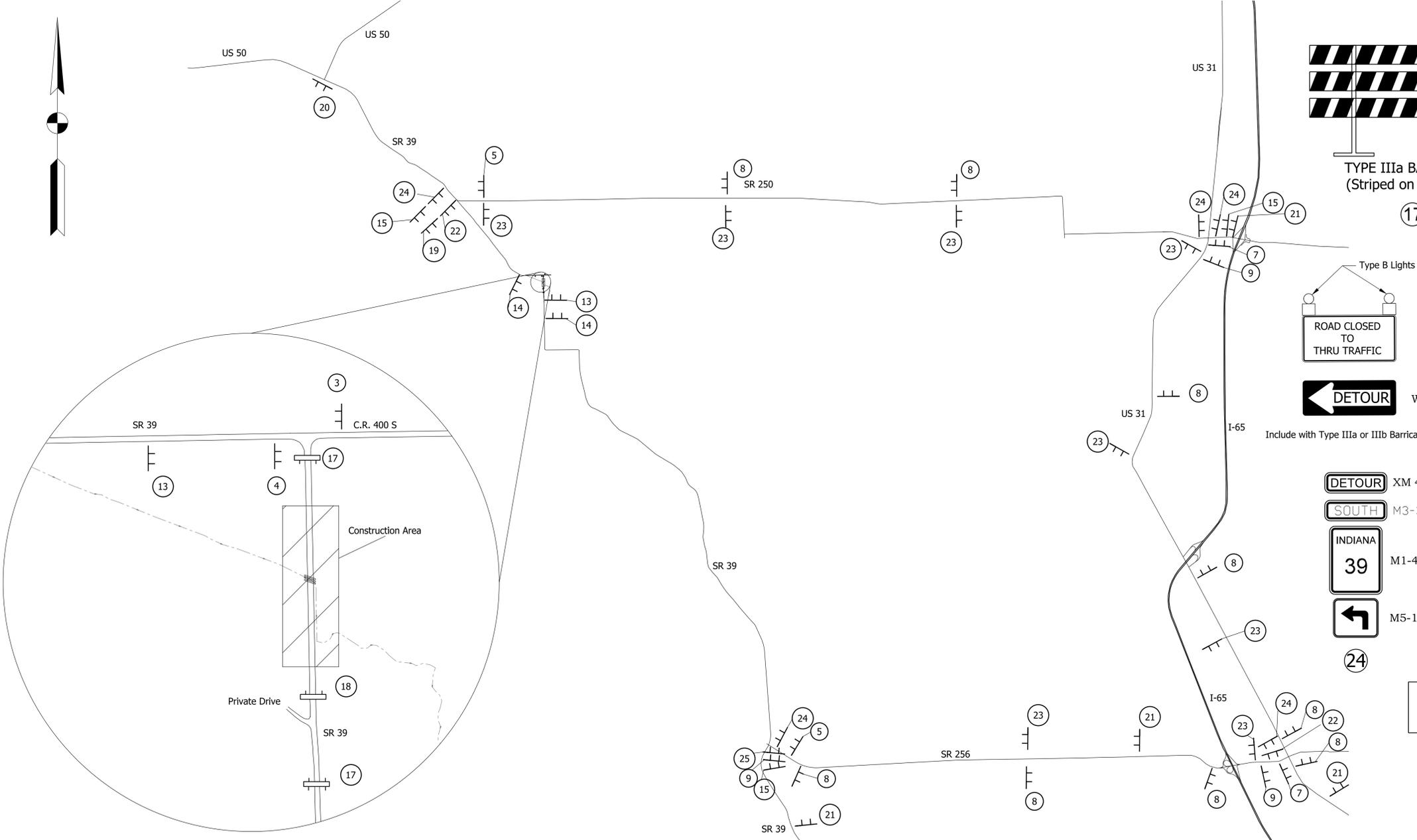
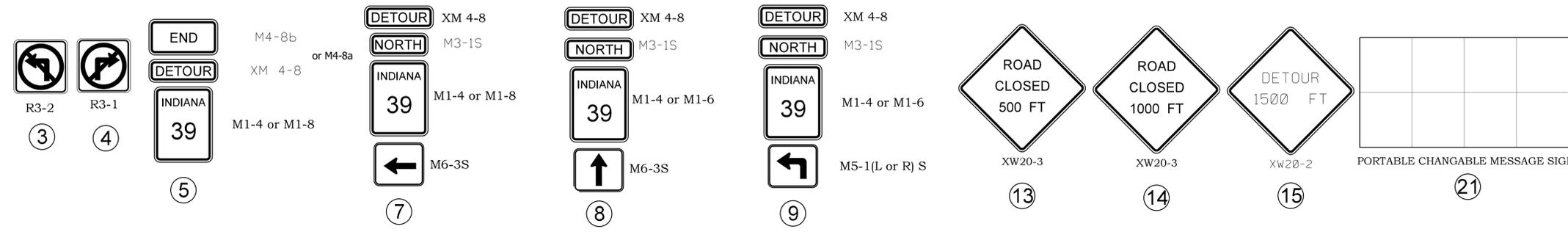
**INDIANA
DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTION

SCALE	BRIDGE FILE
DESIGNATION	1602277
SURVEY BOOK	SHEETS
CONTRACT	3 of 12
B-40488	PROJECT

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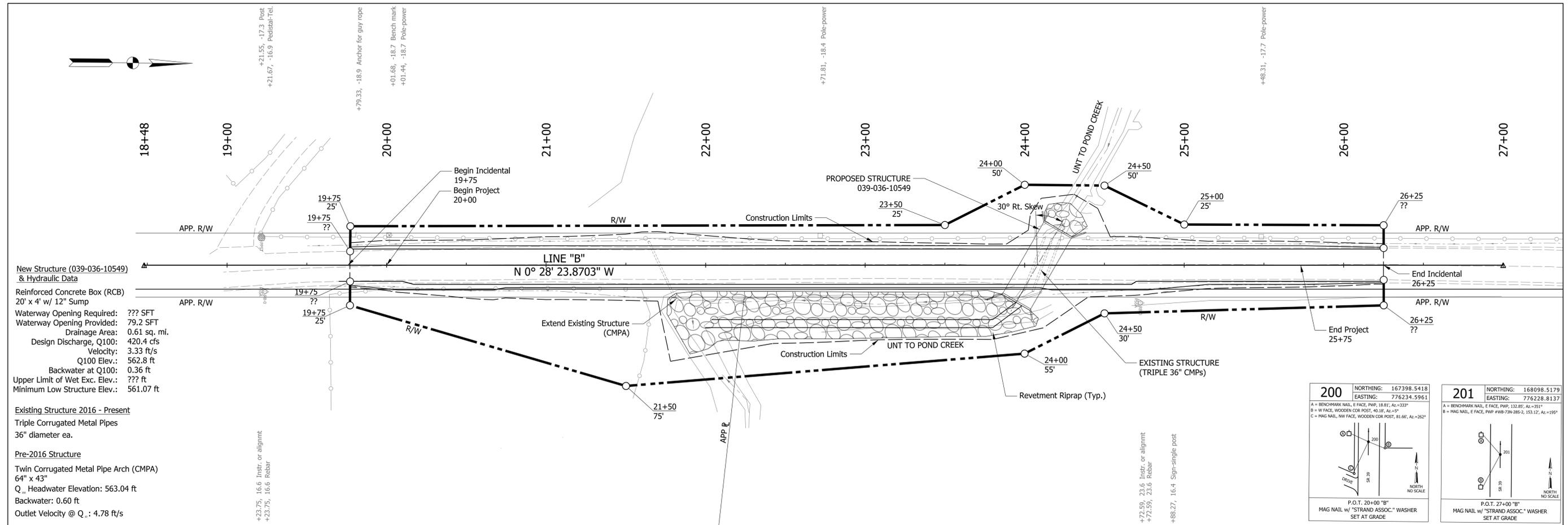
MAINTENANCE OF TRAFFIC SUMMARY TABLE		
ITEM	QUANTITY	UNITS
Portable Changeable Message Sign	3	EACH
Barricade, Type IIIa	60	LFT
Barricade, Type IIIb	30	LFT
Detour Route Marker Assembly	31	EACH
Road Closure Sign Assembly	6	EACH
Detour (XM4-10), R	3	EACH
Detour (XM4-10), L	2	EACH
Construction Sign Type A	3	EACH
Construction Sign Type B	9	EACH



DATE	REVISION	RECOMMENDED FOR APPROVAL DESIGN ENGINEER DATE DESIGNED: MRS 07/23/19 DRAWN: MRS 07/23/19 CHECKED: JPT 07/23/19 CHECKED: JPT 07/23/19	INDIANA DEPARTMENT OF TRANSPORTATION DETOUR	SCALE	BRIDGE FILE
					DESIGNATION
					1602277
					SHEETS
			4 of 12	SURVEY BOOK	
				CONTRACT	PROJECT
				B-40488	

Plot: 8/5/2019 4:32 PM

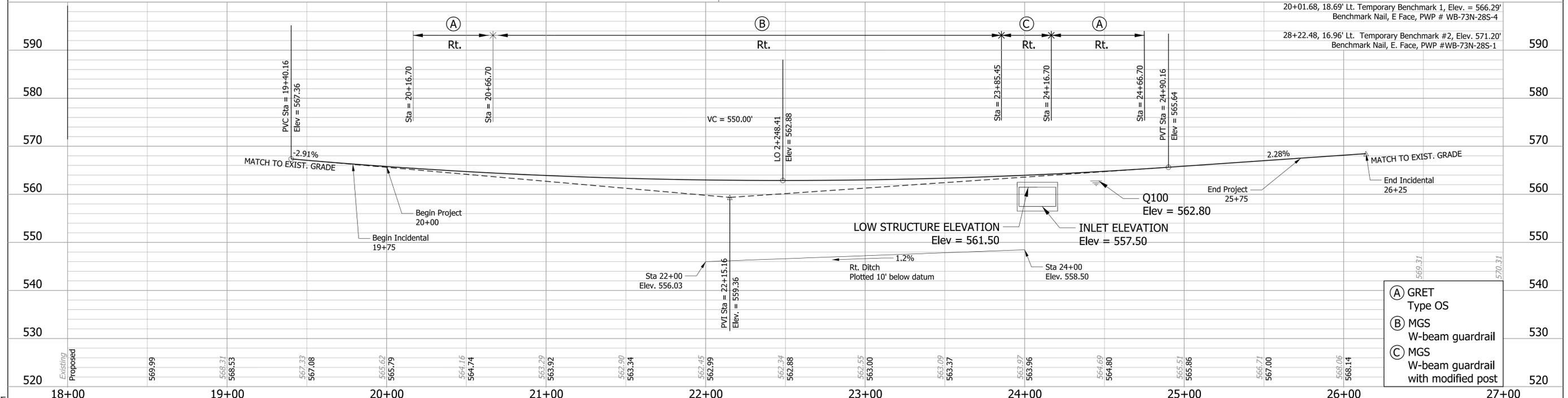
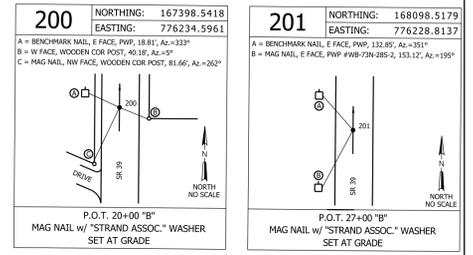
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Model: Detour Sheet



New Structure (039-036-10549) & Hydraulic Data
 Reinforced Concrete Box (RCB)
 20' x 4' w/ 12" Sump
 Waterway Opening Required: ??? SFT
 Waterway Opening Provided: 79.2 SFT
 Drainage Area: 0.61 sq. mi.
 Design Discharge, Q100: 420.4 cfs
 Velocity: 3.33 ft/s
 Q100 Elev.: 562.8 ft
 Backwater at Q100: 0.36 ft
 Upper Limit of Wet Exc. Elev.: ??? ft
 Minimum Low Structure Elev.: 561.07 ft

Existing Structure 2016 - Present
 Triple Corrugated Metal Pipes
 36" diameter ea.

Pre-2016 Structure
 Twin Corrugated Metal Pipe Arch (CMPA)
 64" x 43"
 Q₁₀₀ Headwater Elevation: 563.04 ft
 Backwater: 0.60 ft
 Outlet Velocity @ Q₁₀₀: 4.78 ft/s



- (A) GRET Type OS
- (B) MGS W-beam guardrail
- (C) MGS W-beam guardrail with modified post

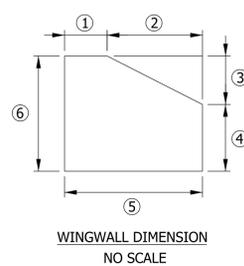
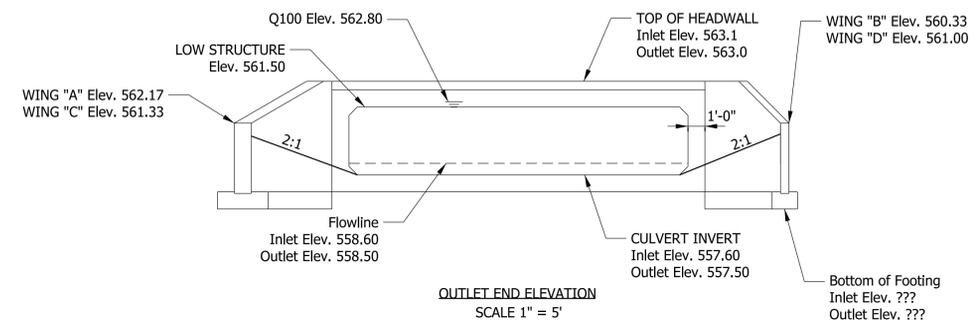
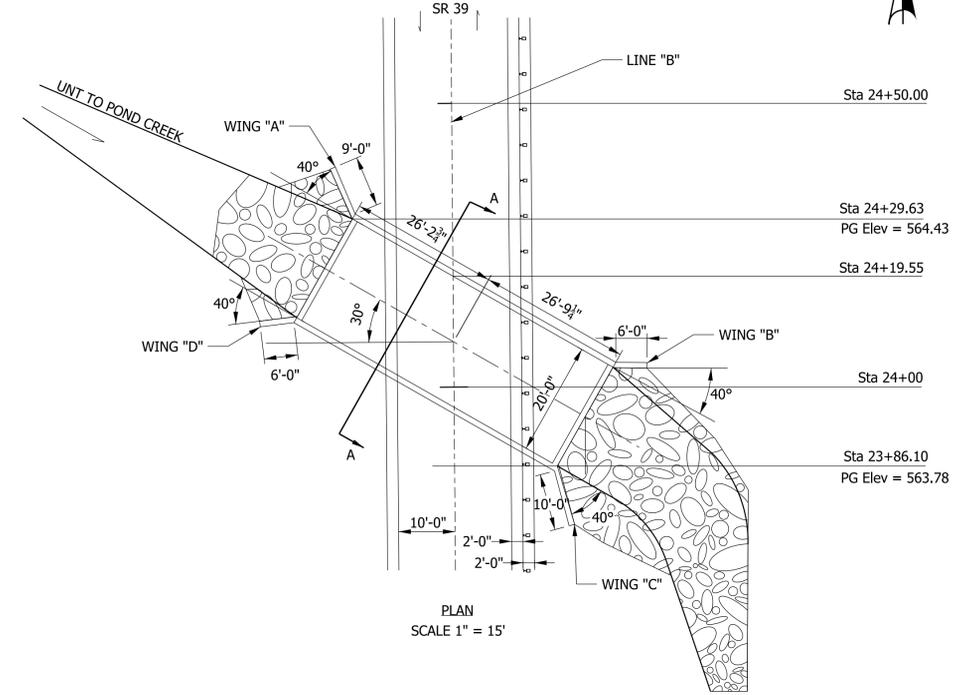
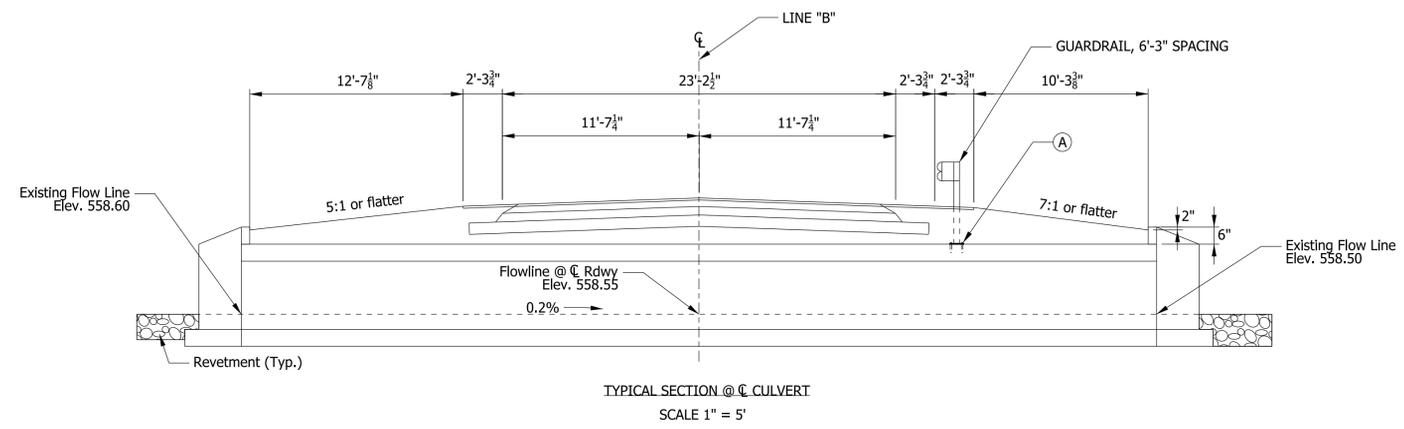
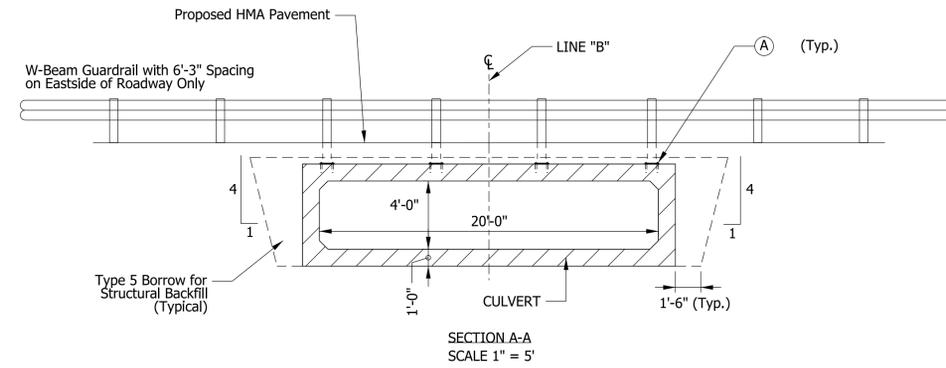
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER		DATE	INDIANA DEPARTMENT OF TRANSPORTATION	SCALE	BRIDGE FILE	
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	CHECKED: JPT 8/6/19		CHECKED: JPT 8/6/19		LAYOUT	SURVEY BOOK	5 of 12 SHEETS
					CONTRACT	PROJECT	
					B-40488		

Plot: 8/16/2019 8:49 AM

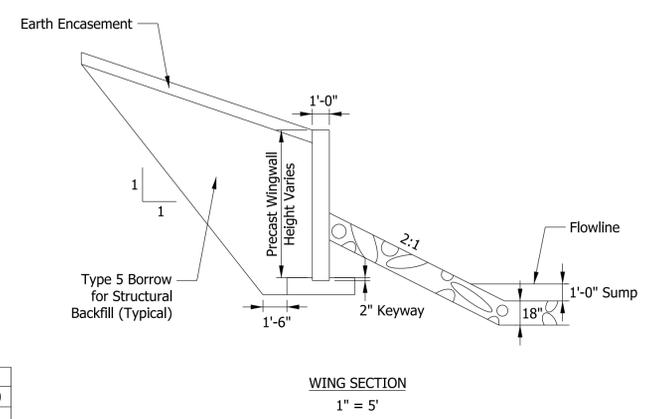
pw:\dotwise.indot.in.gov\DOT\wise\Documents\Seymour\1602277\Design\InRoads\Shft PlanProfile_30_1.dgn

RECOMMENDED PARAMETERS FOR DESIGN	Estimated Value, English
Friction Angle between Wingwall and Soil Backfill (δ), deg.	??
Friction Factor between Footing and Foundation Soil (f)	??
Normal Cohesion of the Foundation Soil (C)	?? Psf
Nominal Adhesion of the Foundation Soil (C_a)	?? Psf
Angle of Internal Friction of Backfill Material, deg.	??

LEGEND
 (A) Top-mounted base plate; see Standard Drawing No. E 601-MGSA-10.



	Wingwall Dimensions and Area						Total
	Dimensions (ft. in.)						
	1	2	3	4	5	6	
Wing "A"	1'-0"	8'-0"	1'-0"	5'-6"	9'-0"	6'-6"	50.5
Wing "B"	1'-0"	5'-0"	2'-3"	4'-3"	6'-0"	6'-6"	27.75
Wing "C"	1'-0"	9'-0"	2'-0"	4'-6"	10'-0"	6'-6"	47.0
Wing "D"	1'-0"	5'-0"	2'-0"	4'-6"	6'-0"	6'-6"	29.0



NOTE
 A three-sided flat top structure will be permitted at this location.

DESIGN DATA
 Superstructure and substructure designed for HL-93 loading, in accordance with the AASHTO LRFD Bridge Design Specifications, 8th Edition, 2017 and its subsequent interims.

PRECAST REINFORCED CONCRETE BOX
 SKEW 30° RT.,
 (20'-0" span 4'-0" rise 53'-0" length)
 SR 39 OVER UNT TO POND CREEK
 IN JACKSON COUNTY

Plot: 8/5/2019 4:33 PM

DATE	REVISION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MRS	07/23/19	DRAWN: MRS 07/23/19
CHECKED: JPT	07/23/19	CHECKED: JPT 07/23/19

INDIANA
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN

SCALE	BRIDGE FILE
AS NOTED	DESIGNATION
	1602277
SURVEY BOOK	SHEETS
	6 of 12
CONTRACT	PROJECT
B-40488	



Strand Associates, Inc.®
629 Washington Street
Columbus, IN 47201
(P) 812-372-9911
(F) 812-372-7190

June 27, 2019

Field Environmental Officer
Chicago Regional Office
U.S. Department of Housing & Urban Development
Metcalf Federal Building
77 West Jackson Boulevard., Rm 2401
Chicago IL, 60604

Re: Des. No. 1602277
Small Structure Replacement, State Road 39
Jackson County, Indiana

Dear Sir or Madam:

The Indiana Department of Transportation (INDOT) and Federal Highway Administration (FHWA) intends to proceed with a project involving the aforementioned small structure in Jackson County. This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. Please use the above designation numbers and description in your reply. We will incorporate your comments into a study of the project's environmental impacts.

This project is located on State Road (SR) 39, approximately 2.14 miles north of SR 250. This section of SR 39 is a two-lane Major Collector. The existing approach cross section consists of two 10-foot lanes without shoulders. The existing small structure is a set of three elliptical corrugated metal pipes with a 14-foot span and 3-foot rise under 2 feet of fill. There is drift across the west end of the pipes. No guardrail or other standard safety features exist at the structure. The approximate existing right-of-way is 20 feet on each side of the centerline throughout the project area.

The current proposed project would replace the small structure and include ditch realignment. The project would require the acquisition of approximately 0.5 acres of permanent right-of-way. Proposed right-of-way widths along SR 39 would be 20 feet from centerline. The project limits would be approximately 650 feet in length. The preferred method of traffic maintenance would be a complete road closure with an official state detour. A temporary runaround will not be used.

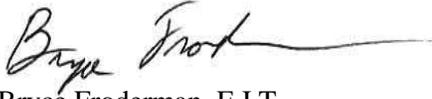
Land use in the vicinity of the project is primarily agricultural and residential. The INDOT Ecology and Permits Office will perform waters and wetlands determinations and a biological assessment to identify any ecological resources that may be present. This project qualifies for the application of the United States Fish and Wildlife Services (USFWS) range-wide programmatic informal consultation for the Indiana bat and northern long-eared bat and a USFWS project information form will be provided to USFWS for review separately. The INDOT Cultural Resources Office will investigate the area of additional right-of-way for archaeological and historic resources for compliance with Section 106. The results of this investigation will be forwarded to the State Historic Preservation Officer for review and concurrence.

Field Environmental Officer
Chicago Regional Office
U.S. Department of Housing & Urban Development
Page 2
June 27, 2019

Should we not receive your response within 30 calendar days from the date of this letter, it will be assumed that your agency feels there will be no adverse effects incurred as a result of the proposed project. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter, please feel free to contact me at (812) 372-9911 or at bryce.froderman@strand.com.

Sincerely,

STRAND ASSOCIATES, INC.®



Bryce Froderman, E.I.T.

Enclosures

c/enc.: File

United States Fish and Wildlife Service, Field Supervisor
Federal Highway Administration
Natural Resource Conservation Service, State Conservationist
Indiana Geological Survey
Indiana Department of Natural Resources, Division of Fish and Wildlife, Environmental Coordinator
Indiana Department of Environmental Management (IDEM)
IDEM, Groundwater Section, Chief
IDEM, Public Hearings, Manager
United States Department of Housing and Urban Development, Chicago Regional Office
National Park Service, Midwest Regional Office, Regional Environmental Coordinator
U.S. Army Corps of Engineers, Louisville District
Eighth Coast Guard District, Bridge Program Section, Chief
U.S. Forest Service, Hoosier National Forest, Forest Supervisor

July 2, 2019

Bryce Froderman, E.I.T.
Strand Associates, Inc.
629 Washington Street
Columbus, Indiana 47201

Dear Mr. Froderman:

The proposed project to make a small structure replacement on State Road 39 in Jackson County, Indiana (Des No 1602277) as referred to in your letter received June 27, 2019, will cause a conversion of prime farmland.

The attached packet of information is for your use competing Parts VI and VII of the AD-1006. After completion, the federal funding agency needs to forward one copy to NRCS for our records.

If you need additional information, please contact Daniel Phillips at 317-295-5871.

Sincerely,

JERRY RAYNOR Digitally signed by JERRY RAYNOR
Date: 2019.07.07 16:10:54 -04'00'

JERRY RAYNOR
State Conservationist

Enclosures



FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request			
Name of Project		Federal Agency Involved			
Proposed Land Use		County and State			
PART II (To be completed by NRCS)		Date Request Received By NRCS		Person Completing Form:	
Does the site contain Prime, Unique, Statewide or Local Important Farmland? <i>(If no, the FPPA does not apply - do not complete additional parts of this form)</i>		YES <input type="checkbox"/>	NO <input type="checkbox"/>	Acres Irrigated	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount of Farmland As Defined in FPPA Acres: %			
Name of Land Evaluation System Used	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS			
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly					
B. Total Acres To Be Converted Indirectly					
C. Total Acres In Site					
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland					
B. Total Acres Statewide Important or Local Important Farmland					
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value					
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)					
PART VI (To be completed by Federal Agency) Site Assessment Criteria <i>(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)</i>		Maximum Points	Site A	Site B	Site C
1. Area In Non-urban Use		(15)			
2. Perimeter In Non-urban Use		(10)			
3. Percent Of Site Being Farmed		(20)			
4. Protection Provided By State and Local Government		(20)			
5. Distance From Urban Built-up Area		(15)			
6. Distance To Urban Support Services		(15)			
7. Size Of Present Farm Unit Compared To Average		(10)			
8. Creation Of Non-farmable Farmland		(10)			
9. Availability Of Farm Support Services		(5)			
10. On-Farm Investments		(20)			
11. Effects Of Conversion On Farm Support Services		(10)			
12. Compatibility With Existing Agricultural Use		(10)			
TOTAL SITE ASSESSMENT POINTS		160			
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100			
Total Site Assessment (From Part VI above or local site assessment)		160			
TOTAL POINTS (Total of above 2 lines)		260			
Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>			
Reason For Selection:					
Name of Federal agency representative completing this form:					Date:

(See Instructions on reverse side)

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

DNR #: ER-21651

Request Received: June 27, 2019

Requestor: Strand Associates Inc
Bryce Froderman
629 Washington Street
Columbus, IN 47201-6231

Project: SR 39 small structure replacement over UNT Pond Creek, and realignment of about 650' of the channel, about 2.14 miles north of SR 250; Des #1602277

County/Site info: Jackson

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

Regulatory Assessment: Formal approval by the Department of Natural Resources under the regulatory programs administered by the Division of Water is not required for this project.

Natural Heritage Database: The Natural Heritage Program's data have been checked. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Fish & Wildlife Comments: Avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. The following are recommendations that address potential impacts identified in the proposed project area:

1) Crossing Structure:

For purposes of maintaining fish and wildlife passage through a crossing structure, the Environmental Unit recommends bridges rather than culverts and bottomless culverts rather than box or pipe culverts. Wide culverts are better than narrow culverts, and culverts with shorter through lengths are better than culverts with longer through lengths. If box or pipe culverts are used, the bottoms should be buried a minimum of 6" (or 20% of the culvert height/pipe diameter, whichever is greater up to a maximum of 2') below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossings should: span the entire channel width (a minimum of 1.2 times the OHWM width); maintain the natural stream substrate within the structure; have a minimum openness ratio (height x width / length) of 0.25; and have stream depth, channel width, and water velocities during low-flow conditions that are approximate to those in the natural stream channel.

Sump depth for a pipe or box culvert should be increased/adjusted to match the structure's design life according to the background rate of bed degradation/downcutting so that the culvert does not become perched long before the culvert requires replacement.

2) Riprap/Stone:

Any riprap placed at the culvert's outlet should match the outlet/invert elevation at the upstream edge of the riprap apron; should be mixed with smaller stone and fines to match the existing stream substrate particle distribution and provide impermeability of the riprap apron/substrate so the flow doesn't percolate through the voids below the

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Division of Fish and Wildlife
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riprap apron's surface; and the slope of the riprap should be no steeper than 20:1 from the lip of the culvert pipe to the streambed. Riprap on the inlet side should have a slope no steeper than 5:1.

Minimize the use of riprap for bank stabilization and use alternative erosion protection materials whenever possible. Riprap must not be placed in the active thalweg channel or placed in the streambed in a manner that precludes fish or aquatic organism passage (riprap must not be placed above the existing streambed elevation). Where riprap must be used, we recommend placing only enough riprap to provide stream bank toe protection, such as from the toe of the bank up to the ordinary high water mark (OHWM). The banks above the OHWM must be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to the area and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion.

Where hard armoring is needed, wildlife passage can be facilitated by using a smooth-surfaced material instead of riprap, such as articulated concrete block mats, fabric-formed concrete mats or other similar smooth-surfaced materials as these materials will not impair wildlife movement.

Information about bioengineering techniques can be found at <http://www.in.gov/legislative/iac/20120404-IR-312120154NRA.xml.pdf>. Also, the following is a USDA/NRCS document that outlines many different bioengineering and other bank stabilization techniques: <http://directives.sc.egov.usda.gov/17553.wba>.

The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:

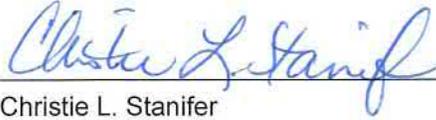
1. Revegetate all bare and disturbed areas in the floodway with a mixture of native grasses, sedges, wildflowers, and also native hardwood trees and shrubs if any woody plants are disturbed during construction as soon as possible upon completion. Do not use any varieties of Tall Fescue or other non-native plants, including prohibited invasive species (see 312 IAC 18-3-25).
2. Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
4. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure.
5. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds.
6. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
7. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
8. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

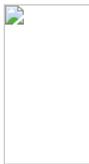
Contact Staff:

Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife
Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.



Date: July 26, 2019

Christie L. Stanifer
Environ. Coordinator
Division of Fish and Wildlife



Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

100 North Senate Avenue - Indianapolis, IN 46204
(800) 451-6027 - (317) 232-8603 - www.idem.IN.gov

INDOT
Brad Williamson
185 Agrico Lane
Seymour, IN 47274
Date

Strand Associates Inc.
Eric Brunn
629 Washington Street
Columbus, IN 47201

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: The project, Des. 1602277, is located on SR 39 over UNT to Pond Creek in Brownstown Township within Jackson County, Indiana approximately 2.14 mile south of SR 250. The proposed culvert will consist of a reinforced concrete box with a span of 20 feet and a rise of 4 feet aligned with a 30 degree skew to the roadway. The project will also include increasing the profile and width of the roadway within the project limits, installing guardrail along the east shoulder of the roadway for approximately 450 feet, and realigning the existing stream channel. The project limits will begin approximately 425 feet south of the culvert and end approximately 225 feet north of the culvert. Construction for the project is scheduled for March 2022 through November 2022.

This letter from the Indiana Department of Environmental Management (IDEM) serves as a standardized response to enquiries inviting IDEM comments on roadway construction, reconstruction, or other improvement projects within existing roadway corridors when the proposed scope of the project is beneath the threshold requiring a formal National Environmental Policy Act-mandated Environmental Assessment or Environmental Impact Statement. As the letter attempts to address all roadway-related environmental topics of potential concern, it is possible that not every topic addressed in the letter will be applicable to your particular roadway project.

For additional information on specific roadway-related topics of interest, please visit the appropriate Web pages cited below, many of which provide contact information for persons within the various program areas who can answer questions not fully addressed in this letter. Also please be mindful that some environmental requirements may be subject to change and so each person intending to include a copy of this letter in their project documentation packet is advised to download the most recently revised version of the letter; found at: <http://www.in.gov/idem/5283.htm> (<http://www.in.gov/idem/5283.htm>).

To ensure that all environmentally-related issues are adequately addressed, IDEM recommends that you read this letter in its entirety, and consider each of the following issues as you move forward with the planning of your proposed roadway construction, reconstruction, or improvement project:

WATER AND BIOTIC QUALITY

- Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

USACE recommends that you have a consultant check to determine whether your project will abut, or lie within, a wetland area. To view a list of consultants that have requested to be included on a list posted by the USACE on their Web site, see USACE Permits and Public Notices (<http://www.lrl.usace.army.mil/orf/default.asp>) and then click on "Information" from the menu on the right-hand side of that page. Their "Consultant List" is the fourth entry down on the "Information" page. Please note that the USACE posts all consultants that request to appear on the list, and that inclusion of any particular consultant on the list does not represent an endorsement of that consultant by the USACE, or by IDEM.

Much of northern Indiana (Newton, Lake, Porter, LaPorte, St. Joseph, Elkhart, LaGrange, Steuben, and Dekalb counties; large portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and lesser portions of Benton, White, Pulaski, Kosciusko, and Wells counties) is served by the USACE District Office in Detroit (313-226-6812). The central and southern portions of the state (large portions of Benton, White, Pulaski, Kosciusko, and Wells counties; smaller portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and all other Indiana counties located in north-central, central, and southern Indiana) are served by the USACE Louisville District Office (502-315-6733).

Additional information on contacting these U.S. Army Corps of Engineers (USACE) District Offices, government agencies with jurisdiction over wetlands, and other water quality issues, can be found at <http://www.in.gov/idem/4396.htm> (<http://www.in.gov/idem/4396.htm>). IDEM recommends that impacts to wetlands and other water resources be avoided to the fullest extent.

- In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality Wetlands Program. To learn more about the Wetlands Program, visit: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>).
- If the USACE determines that a wetland or other water body is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana. A State Isolated Wetland permit from IDEM's Office of Water Quality (OWQ) is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the OWQ Wetlands Program at 317-233-8488.
- If your project will involve over a 0.5 acre of wetland impact, stream relocation, or other large-scale alterations to water bodies such as the creation of a dam or a water diversion, you should seek additional input from the OWQ Wetlands Program staff. Consult the Web at: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>) for the appropriate staff contact to further discuss your project.
- Work within the one-hundred year floodway of a given water body is regulated by the Department of Natural Resources, Division of Water. The Division issues permits for activities regulated under the following statutes:
 - o IC 14-26-2 Lakes Preservation Act 312 IAC 11
 - o IC 14-26-5 Lowering of Ten Acre Lakes Act No related code
 - o IC 14-28-1 Flood Control Act 310 IAC 6-1
 - o IC 14-29-1 Navigable Waterways Act 312 IAC 6
 - o IC 14-29-3 Sand and Gravel Permits Act 312 IAC 6
 - o IC 14-29-4 Construction of Channels Act No related code

For information on these Indiana (statutory) Code and Indiana Administrative Code citations, see the DNR Web site at: <http://www.in.gov/dnr/water/9451.htm> (<http://www.in.gov/dnr/water/9451.htm>). Contact the DNR Division of Water at 317-232-4160 for further information.

The physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies should be limited to only that which is absolutely necessary to complete the project. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life.

6. For projects involving construction activity (which includes clearing, grading, excavation and other land disturbing activities) that result in the disturbance of one (1), or more, acres of total land area, contact the Office of Water Quality – Watershed Planning Branch (317/233-1864) regarding the need for a Rule 5 Storm Water Runoff Permit. Visit the following Web page
- <http://www.in.gov/idem/4902.htm> (<http://www.in.gov/idem/4902.htm>)

To obtain, and operate under, a Rule 5 permit you will first need to develop a Construction Plan (<http://www.in.gov/idem/4917.htm#constreq>) (<http://www.in.gov/idem/4917.htm#constreq>), and as described in 327 IAC 15-5-6.5 (<http://www.in.gov/legislative/iac/T03270/A00150> [PDF]) (<http://www.in.gov/legislative/iac/T03270/A00150.PDF>), pages 16 through 19). Before you may apply for a Rule 5 Permit, or begin construction, you must submit your Construction Plan to your county Soil and Water Conservation District (SWCD) (<http://www.in.gov/isda/soil/contacts/map.html>) (<http://www.in.gov/isda/soil/contacts/map.html>).

Upon receipt of the construction plan, personnel of the SWCD or the Indiana Department of Environmental Management will review the plan to determine if it meets the requirements of 327 IAC 15-5. Plans that are deemed deficient will require re-submittal. If the plan is sufficient you will be notified and instructed to submit the verification to IDEM as part of the Rule 5 Notice of Intent (NOI) submittal. Once construction begins, staff of the SWCD or Indiana Department of Environmental Management will perform inspections of activities at the site for compliance with the regulation.

Please be mindful that approximately 149 Municipal Separate Storm Sewer System (MS4) areas are now being established by various local governmental entities throughout the state as part of the implementation of Phase II federal storm water requirements. All of these MS4 areas will eventually take responsibility for Construction Plan review, inspection, and enforcement. As these MS4 areas obtain program approval from IDEM, they will be added to a list of MS4 areas posted on the IDEM Website at: <http://www.in.gov/idem/4900.htm> (<http://www.in.gov/idem/4900.htm>).

If your project is located in an IDEM-approved MS4 area, please contact the local MS4 program about meeting their storm water requirements. Once the MS4 approves the plan, the NOI can be submitted to IDEM.

Regardless of the size of your project, or which agency you work with to meet storm water requirements, IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, and after completion of the project, to minimize the impacts associated with storm water runoff. The use of appropriate planning and site development and appropriate storm water quality measures are recommended to prevent soil from leaving the construction site during active land disturbance and for post construction water quality concerns. Information and assistance regarding storm water related to construction activities are available from the Soil and Water Conservation District (SWCD) offices in each county or from IDEM.

7. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317/232-4080) for addition project input.
8. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.
9. For projects involving effluent discharges to waters of the State of Indiana, contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.
10. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

AIR QUALITY

The above-noted project should be designed to minimize any impact on ambient air quality in, or near, the project area. The project must comply with all federal and state air pollution regulations. Consideration should be given to the following:

1. Regarding open burning, and disposing of organic debris generated by land clearing activities; some types of open burning are allowed (<http://www.in.gov/idem/4148.htm>) (<http://www.in.gov/idem/4148.htm>) under specific conditions. You also can seek an open burning variance from IDEM.

However, IDEM generally recommends that you take vegetative wastes to a registered yard waste composting facility or that the waste be chipped or shredded with composting on site (you must register with IDEM if more than 2,000 pounds is to be composted; contact 317/232-0066). The finished compost can then be used as a mulch or soil amendment. You also may bury any vegetative wastes (such as leaves, twigs, branches, limbs, tree trunks and stumps) onsite, although burying large quantities of such material can lead to subsidence problems, later on.

Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized.

Additionally, if construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for 3-5 years precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus *Histoplasma capsulatum*, which stems from bird or bat droppings that have accumulated in one area for 3-5 years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at (317) 233-7272.

2. The U.S. EPA and the Surgeon General recommend that people not have long-term exposure to radon at levels above 4 pCi/L. (For a county-by-county map of predicted radon levels in Indiana, visit: <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>).

The U.S. EPA further recommends that all homes (and apartments within three stories of ground level) be tested for radon. If in-home radon levels are determined to be 4 pCi/L, or higher, EPA recommends a follow-up test. If the second test confirms that radon levels are 4 pCi/L, or higher, EPA recommends the installation of radon-reduction measures. (For a list of qualified radon testers and radon mitigation (or reduction) specialists visit: http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf (http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf)). It also is recommended that radon reduction measures be built into all new homes, particularly in areas like Indiana that have moderate to high predicted radon levels.

To learn more about radon, radon risks, and ways to reduce exposure visit: <http://www.in.gov/isdh/regsvcs/radhealth/radon.htm> (<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm>), <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>), or <http://www.epa.gov/radon/index.html> (<http://www.epa.gov/radon/index.html>).

3. With respect to asbestos removal: all facilities slated for renovation or demolition (except residential buildings that have (4) four or fewer dwelling units and which will not be used for commercial purposes) must be inspected by an Indiana-licensed asbestos inspector prior to the commencement of any renovation or demolition activities. If regulated asbestos-containing material (RACM) that may become airborne is found, any subsequent demolition, renovation, or asbestos removal activities must be performed in accordance with the proper notification and emission control requirements.

If no asbestos is found where a renovation activity will occur, or if the renovation involves removal of less than 260 linear feet of RACM off of pipes, less than 160 square feet of RACM off of other facility components, or less than 35 cubic feet of RACM off of all facility components, the owner or operator of the project does not need to notify IDEM before beginning the renovation activity.

For questions on asbestos demolition and renovation activities, you can also call IDEM's Lead/Asbestos section at 1-888-574-8150.

However, in all cases where a demolition activity will occur (even if no asbestos is found), the owner or operator must still notify IDEM 10 working days prior to the demolition, using the form found at <http://www.in.gov/icpr/webfile/formsdiv/44593.pdf> (<http://www.in.gov/icpr/webfile/formsdiv/44593.pdf>).

Anyone submitting a renovation/demolition notification form will be billed a notification fee based upon the amount of friable asbestos containing material to be removed or demolished. Projects that involve the removal of more than 2,600 linear feet of friable asbestos containing materials on pipes, or 1,600 square feet or 400 cubic feet of friable asbestos containing material on other facility components, will be billed a fee of \$150 per project; projects below these amounts will be billed a fee of \$50 per project. All notification remitters will be billed on a quarterly basis.

For more information about IDEM policy regarding asbestos removal and disposal, visit: <http://www.in.gov/idem/4983.htm> (<http://www.in.gov/idem/4983.htm>).

4. With respect to lead-based paint removal: IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978, or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal visit: <http://www.in.gov/isdh/19131.htm> (<http://www.in.gov/isdh/19131.htm>).
5. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months April through October. See 326 IAC 8-5-2, Asphalt Paving Rule (<http://www.ai.org/legislative/iac/T03260/A00080.PDF>) (<http://www.ai.org/legislative/iac/T03260/A00080.PDF>).
6. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (View at: www.ai.org/legislative/iac/03260/a00020.pdf) (<http://www.ai.org/legislative/iac/03260/a00020.pdf>.) New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.
7. For more information on air permits visit: <http://www.in.gov/idem/4223.htm> (<http://www.in.gov/idem/4223.htm>), or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or OAMPROD atdem.state.in.us.

LAND QUALITY

In order to maintain compliance with all applicable laws regarding contamination and/or proper waste disposal, IDEM recommends that:

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ) at 317-308-3103.
2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit <http://www.in.gov/idem/4998.htm> (<http://www.in.gov/idem/4998.htm>).
3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.
4. If PCBs are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.
5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes (Asbestos removal is addressed above, under Air Quality).
6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317/308-3039. See: <http://www.in.gov/idem/4999.htm> (<http://www.in.gov/idem/4999.htm>).

FINAL REMARKS

Should you need to obtain any environmental permits in association with this proposed project, please be mindful that IC 13-15-8 requires that you notify all adjoining property owners and/or occupants within ten days your submittal of each permit application. However, if you are seeking multiple permits, you can still meet the notification requirement with a single notice if all required permit applications are submitted with the same ten day period.

Should the scope of the proposed project be expanded to the extent that a National Environmental Policy Act Environmental Assessment (EA) or Environmental Impact Statement (EIS) is required, IDEM will actively participate in any early interagency coordination review of the project.

Meanwhile, please note that this letter does not constitute a permit, license, endorsement or any other form of approval on the part of the Indiana Department of Environmental Management regarding any project for which a copy of this letter is used. Also note that it is the responsibility of the project engineer or consultant using this letter to ensure that the most current draft of this document, which is located at <http://www.in.gov/idem/5284.htm> (<http://www.in.gov/idem/5284.htm>), is used.

Signature(s) of the Applicant

I acknowledge that the following proposed roadway project will be financed in part, or in whole, by public monies.

Project Description

The project, Des. 1802277, is located on SR 39 over UNT to Pond Creek in Brownstown Township within Jackson County, Indiana approximately 2.14 mile south of SR 250. The proposed culvert will consist of a reinforced concrete box with a span of 20 feet and a rise of 4 feet aligned with a 30 degree skew to the roadway. The project will also include increasing the profile and width of the roadway within the project limits, installing guardrail along the east shoulder of the roadway for approximately 450 feet, and realigning the existing stream channel. The project limits will begin approximately 425 feet south of the culvert and end approximately 225 feet north of the culvert. Construction for the project is scheduled for March 2022 through November 2022.

With my signature, I do hereby affirm that I have read the letter from the Indiana Department of Environment that appears directly above. In addition, I understand that in order to complete that project in which I am interested, with a minimum of impact to the environment, I must consider all the issues addressed in the aforementioned letter, and further, that I must obtain any required permits.

Date: 10/22/2019

Signature of the INDOT
Project Engineer or Other Responsible Agent

Brad Williamson

Date: 10/22/19
Signature of the
For Hire Consultant

Brad Williamson

Eric Bunn

Organization and Project Information

Project ID:

Des. ID:

Project Title: State Road 39 Small Structure Replacement

Name of Organization: Strand Associates Inc.

Requested by: Bryce Froderman

Environmental Assessment Report

1. Geological Hazards:

- High liquefaction potential

2. Mineral Resources:

- Bedrock Resource: Moderate Potential
- Sand and Gravel Resource: Low Potential

3. Active or abandoned mineral resources extraction sites:

- None documented in the area

*All map layers from Indiana Map (maps.indiana.edu)

DISCLAIMER:

This document was compiled by Indiana University, Indiana Geological Survey, using data believed to be accurate; however, a degree of error is inherent in all data. This product is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability to a particular purpose or use. No attempt has been made in either the design or production of these data and document to define the limits or jurisdiction of any federal, state, or local government. The data used to assemble this document are intended for use only at the published scale of the source data or smaller (see the metadata links below) and are for reference purposes only. They are not to be construed as a legal document or survey instrument. A detailed on-the-ground survey and historical analysis of a single site may differ from these data and this document.

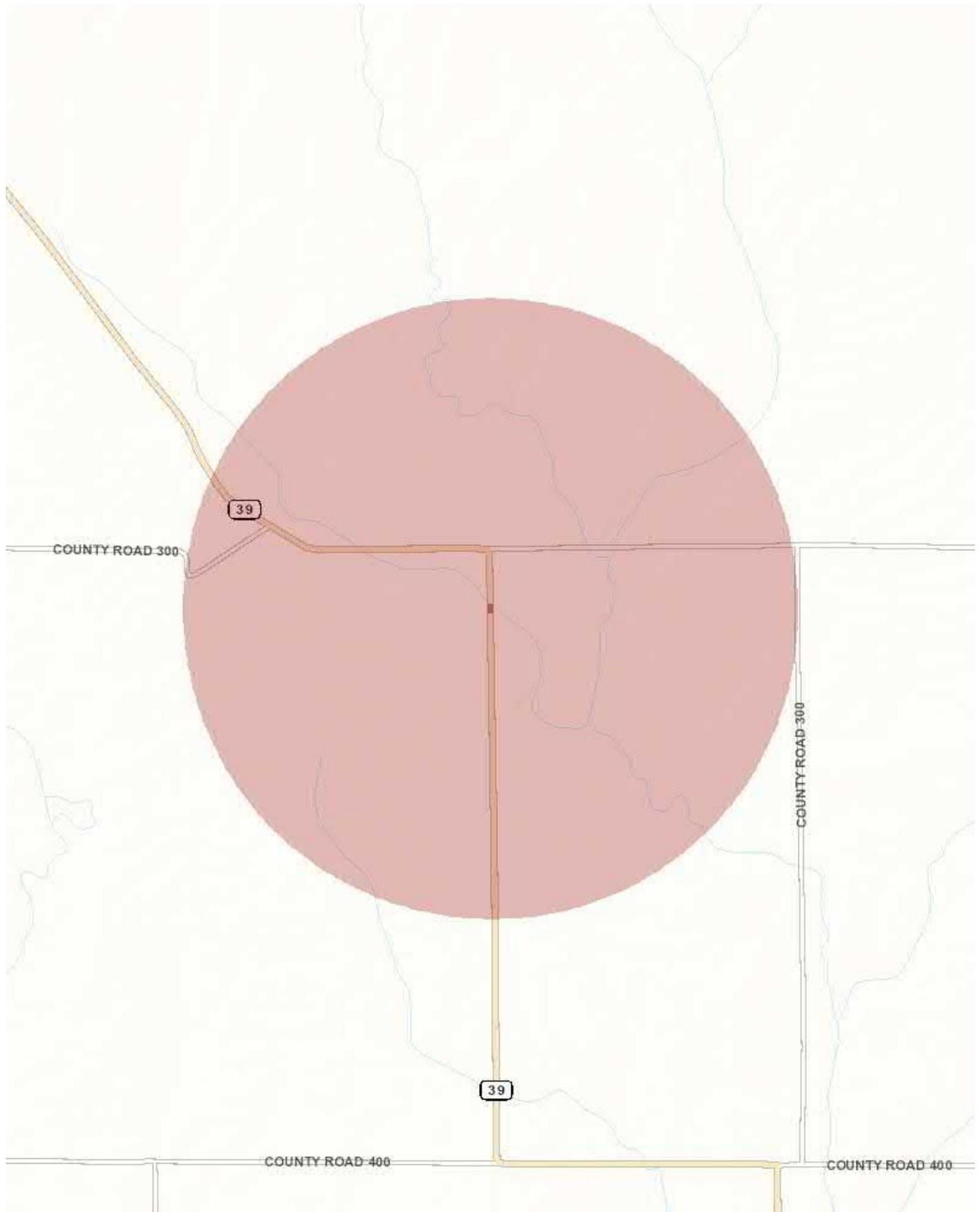
This information was furnished by Indiana Geological Survey

Address: 420 N. Walnut St., Bloomington, IN 47404

Email: IGSEnvir@indiana.edu

Phone: 812 855-7428

Date: June 27, 2019



Metadata:

- https://maps.indiana.edu/metadata/Geology/Seismic_Earthquake_Liquefaction_Potential.html
- https://maps.indiana.edu/metadata/Geology/Industrial_Minerals_Sand_Gravel_Resources.html
- https://maps.indiana.edu/metadata/Geology/Bedrock_Geology.html

Froderman, Bryce

From: Wright, Mary <MWRIGHT@indot.IN.gov>
Sent: Tuesday, July 9, 2019 11:34 AM
To: Froderman, Bryce
Subject: RE: 1602277 SR 39 Small Structure Jackson Co Early Coordination

Early Coordination and Creating a Public Involvement Plan (PIP)

We have received your early coordination notification packet for the above referenced project(s). Our office prefers to be notified at the early coordination stage in order to encourage early and ongoing public involvement aside from the specific legal requirements as outlined in our Public Involvement Manual <http://www.in.gov/indot/2366.htm>. Seeking the public's understanding of transportation improvement projects early in the project development stage can allow the opportunity for the public to express their concerns, comments, and to seek buy-in. Early coordination is the perfect opportunity to examine the proposed project and its impacts to the community along with the many ways and or tools to inform the public of the improvements and seek engagement. A good public involvement plan, or PIP, should consider the type, scope, impacts, and the level of public awareness that should, or could, be implemented. In other words, although there are cases where no public involvement is legally required, sometimes it is simply the right thing to do in order to keep the public informed.

The public involvement office is always available to provide support and resources to bolster any public involvement activities you may wish to implement or discuss. Please feel free to contact our office anytime should you have any questions or concerns. Thank you for notifying our office about your proposed project. We trust you will not only analyze the appropriate public involvement required, but also consider the opportunity to do go above and beyond those requirements in creating a good PIP.

Rickie Clark, Manager
100 North Senate Avenue, Room N642
Indianapolis, IN 46204
Phone: 317-232-6601
Email: rclark@indot.in.gov

Mary Wright, Hearing Examiner
Phone: 317-234-0796
Email: mwright@indot.in.gov

Froderman, Bryce

From: McWilliams, Robin <robin_mcwilliams@fws.gov>
Sent: Tuesday, July 2, 2019 9:39 AM
To: Froderman, Bryce
Subject: Re: [EXTERNAL] Early Coordination Letter - State Road 39 over Small Structure - Des. 1602277

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Dear Bryce,

This responds to your recent letter, requesting our comments on the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The project is within the range of the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) and should follow the new Indiana bat/northern long-eared bat programmatic consultation process, if applicable (*i.e.* a federal transportation nexus is established). We will review that information once it is received.

Based on a review of the information you provided, the U.S. Fish and Wildlife Service has no objections to the project as currently proposed. However, should new information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinstate consultation. Standard recommendations are provided below.

We appreciate the opportunity to comment at this early stage of project planning. If project plans change such that fish and wildlife habitat may be affected, please re-coordinate with our office as soon as possible. If you have any questions about our recommendations, please call (812) 334-4261 x. 207.

Sincerely,
Robin McWilliams Munson

Standard Recommendations:

1. Do not clear trees or understory vegetation outside the construction zone boundaries. (**This restriction is not related to the "tree clearing" restriction for potential Indiana Bat habitat.**)
2. Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap.

Culverts should span the active stream channel, should be either embedded or a 3-sided or open-arch culvert, and be installed where practicable on an essentially flat slope. When an open-bottomed culvert or arch is used in a stream, which has a good

natural bottom substrate, such as gravel, cobbles and boulders, the existing substrate should be left undisturbed beneath the culvert to provide natural habitat for the aquatic community.

3. Restrict channel work and vegetation clearing to the minimum necessary for installation of the stream crossing structure.
4. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If rip rap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat.
5. Implement temporary erosion and sediment control methods within areas of disturbed soil. All disturbed soil areas upon project completion will be vegetated following INDOT's standard specifications.
6. Avoid all work within the inundated part of the stream channel (in perennial streams and larger intermittent streams) during the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season. No equipment shall be operated below Ordinary High Water Mark during this time unless the machinery is within the caissons or on the cofferdams.
7. Evaluate wildlife crossings under bridge/culverts projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing.

Robin McWilliams Munson

U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, Indiana 46403
812-334-4261 x. 207 Fax: 812-334-4273

Monday, Tuesday - 7:30a-3:00p
Wednesday, Thursday - telework 8:30a-3:00p

On Thu, Jun 27, 2019 at 1:26 PM Froderman, Bryce <Bryce.Froderman@strand.com> wrote:

Hello,

Please see the attached letter and attachments for your review as part of the early coordination process for Des. No. 1602277. Please let me know if you have any comments or questions.

Thanks,



Bryce Froderman
Strand Associates, Inc.®

APPENDIX D: Bridge/Structure Assessment Form

This form will be completed and submitted to the District Environmental Manager by the Contractor prior to conducting any work below the deck surface either from the underside; from activities above that bore down to the underside; from activities that could impact expansion joints; from deck removal on bridges; or from structure demolition for bridges/structures within 1000 feet of suitable bat habitat.

DOT Project # Des. No. 1602277	Water Body Unnamed Tributary to Pond Creek	Date/Time of Inspection August 1, 2019 / 11:00 AM	Within 1,000ft of suitable bat habitat (circle one) Yes No
--	--	---	--

Route	County	Federal Structure ID
S.R. 39	Jackson County	CV 039-036-13.45

If the bridge/structure is 1,000 feet or more from suitable bat habitat (e.g., an urban or agricultural area without suitable foraging habitat or corridors linking the bridge to suitable foraging habitat), check box and STOP HERE. No assessment required.

Please submit to the U.S. Fish and Wildlife Service.

Areas Inspected (Check all that apply)

Bridges		Culverts/Other Structures		Summary Info (circle all that apply)			
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep		Crevices, rough surfaces or imperfections in concrete	X	Human disturbance or traffic under bridge/in culvert or at the structure	High	Low	None
All crevices >12" deep & not sealed		Spaces between walls, ceiling joists	X	Possible corridors for netting	None/poor	Marginal	Excellent
All guardrails							
All expansion joints							
Spaces between concrete end walls and the bridge deck							

Last Revised May 31, 2017

Vertical surfaces on concrete I-beams							
---------------------------------------	--	--	--	--	--	--	--

Evidence of Bats (Circle all that apply) Presence of one or more indicators is sufficient evidence that bats may be using the structure.

None

Visual (e.g. survey, thermal, emergent etc.)

- Live 0 number seen
- Dead 0 number seen

Photo documentation Y/N

Guano

Odor Y/N

Photo documentation Y/N

Staining definitively from bats

Photo documentation Y/N

Audible

Assessment Conducted By: <u>Cory Shumate</u> Signature(s): <u><i>CShumate</i></u>
District Environmental Use Only: Date Received by District Environmental Manager: _____

DOT Bat Assessment Form Instructions

1. Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges, regardless of whether assessments have been conducted in the past.
2. Any bridge/structure suspected of providing habitat for any species of bat will be removed from work schedules until such time that the DOT has coordinated with the USFWS. Additional studies may be undertaken by the DOT to determine what species may be utilizing each structure identified as supporting bats prior to allowing any work to proceed.
3. Any questions should be directed to the District Environmental Manager.



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

Phone: (812) 334-4261 Fax: (812) 334-4273

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

In Reply Refer To:

October 30, 2019

Consultation Code: 03E12000-2020-I-0044

Event Code: 03E12000-2020-E-00776

Project Name: Culvert Replacement Project - Des. 1602277 - SR 39 over UNT to Pond Creek

Subject: Concurrence verification letter for the 'Culvert Replacement Project - Des. 1602277 - SR 39 over UNT to Pond Creek' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated to verify that the **Culvert Replacement Project - Des. 1602277 - SR 39 over UNT to Pond Creek** (Proposed Action) may rely on the concurrence provided in the February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, may affect, but is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*).

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/structure removal, replacement, and/or maintenance activities: If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or Northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required. If the Proposed Action may affect any other federally-listed or proposed species, and/or any designated critical habitat, additional consultation is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please contact this Service Office.

Project Description

The following project name and description was collected in IPaC as part of the endangered species review process.

Name

Culvert Replacement Project - Des. 1602277 - SR 39 over UNT to Pond Creek

Description

This project is located on SR 39 over UNT to Pond Creek in Jackson County, Indiana. The proposed culvert replacement will include the installation of a reinforced concrete box culvert with a span 20 foot and a rise of 4 foot with a skew of 30 degrees to the roadway. The project will also include increasing the profile and width of the roadway within the project limits, installing guardrail along the east shoulder of the roadway for approximately 450 feet, and realigning the existing stream channel. The project limits will begin approximately 425 feet south of the culvert and end approximately 225 feet north of the culvert. Construction for the project is scheduled to begin in the Spring of 2022.

Determination Key Result

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the threatened Northern long-eared bat. Therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

Qualification Interview

1. Is the project within the range of the Indiana bat^[1]?

[1] See [Indiana bat species profile](#)

Automatically answered

Yes

2. Is the project within the range of the Northern long-eared bat^[1]?

[1] See [Northern long-eared bat species profile](#)

Automatically answered

Yes

3. Which Federal Agency is the lead for the action?

A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction^[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

[1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces^[1]?

[1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum^[1]?

[1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

No

7. Is the project located **within** a karst area?

No

8. Is there *any* suitable^[1] summer habitat for Indiana Bat or NLEB **within** the project action area^[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the [national consultation FAQs](#).

Yes

9. Will the project remove *any* suitable summer habitat^[1] and/or remove/trim any existing trees **within** suitable summer habitat?

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

No

10. Does the project include activities **within documented Indiana bat habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry triangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

11. Does the project include activities **within documented NLEB habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

12. Does the project include maintenance of the surrounding landscape at existing facilities (e.g., rest areas, stormwater detention basins)?

No

13. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

No

14. Does the project include slash pile burning?

No

15. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

Yes

16. Is there *any* suitable habitat^[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's current [summer survey guidance](#) for our current definitions of suitable habitat.

Yes

17. Has a bridge assessment^[1] been conducted **within** the last 24 months^[2] to determine if the bridge is being used by bats?

[1] See [User Guide Appendix D](#) for bridge/structure assessment guidance

[2] Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

Yes

SUBMITTED DOCUMENTS

- *Bat Survey.pdf* <https://ecos.fws.gov/ipac/project/JWAYIF6MUFEWND27XSYONASXCQ/projectDocuments/18623419>

18. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)^[1]?

[1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

No

19. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

No

20. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

No

21. Will the project involve the use of **temporary** lighting *during* the active season?

Yes

22. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

Yes

23. Will the project install new or replace existing **permanent** lighting?

No

24. Does the project include percussives or other activities (**not including tree removal/trimming or bridge/structure work**) that will increase noise levels above existing traffic/background levels?

No

25. Are *all* project activities that are **not associated with** habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

Examples: lining roadways, unlighted signage , rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

Yes

26. Will the project raise the road profile **above the tree canopy**?

No

27. Are the project activities that are not associated with habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives consistent with a No Effect determination in this key?

Automatically answered

Yes, other project activities are limited to actions that DO NOT cause any additional stressors to the bat species as described in the BA/BO

28. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

Automatically answered

Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected

29. General AMM 1

Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

Yes

30. Lighting AMM 1

Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

Yes

Project Questionnaire

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

N/A

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

N/A

3. Please describe the proposed bridge work:

The proposed project will consist of the replacement of the existing three pipe culvert structure with a reinforced concrete box culvert with a span of 20 feet and a rise of 4 feet. The project will also include increasing the profile and width of the roadway within the project limits, installing guardrail along the east shoulder of the roadway for approximately 450 feet, and realigning the existing stream channel. The project limits will begin approximately 425 feet south of the culvert and end approximately 225 feet north of the culvert.

4. Please state the timing of all proposed bridge work:

Construction is scheduled to begin in the spring of 2022.

5. Please enter the date of the bridge assessment:

August 1, 2019

Avoidance And Minimization Measures (AMMs)

This determination key result includes the commitment to implement the following Avoidance and Minimization Measures (AMMs):

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on March 16, 2018. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects](#). The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

Phone: (812) 334-4261 Fax: (812) 334-4273

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

In Reply Refer To:

October 29, 2019

Consultation Code: 03E12000-2020-SLI-0044

Event Code: 03E12000-2020-E-00728

Project Name: Culvert Replacement Project - Des. 1602277 - SR 39 over UNT to Pond Creek

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project “may affect” listed species or critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website <http://ecos.fws.gov/ipac/> at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - <http://www.fws.gov/midwest/endangered/section7/s7process/index.html>. This website contains step-by-step instructions which will help you

determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*) and Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at <http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html> to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

(812) 334-4261

Project Summary

Consultation Code: 03E12000-2020-SLI-0044

Event Code: 03E12000-2020-E-00728

Project Name: Culvert Replacement Project - Des. 1602277 - SR 39 over UNT to Pond Creek

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Description: This project is located on SR 39 over UNT to Pond Creek in Jackson County, Indiana. The proposed culvert replacement will include the installation of a reinforced concrete box culvert with a span 20 foot and a rise of 4 foot with a skew of 30 degrees to the roadway. The project will also include increasing the profile and width of the roadway within the project limits, installing guardrail along the east shoulder of the roadway for approximately 450 feet, and realigning the existing stream channel. The project limits will begin approximately 425 feet south of the culvert and end approximately 225 feet north of the culvert. Construction for the project is scheduled to begin in the Spring of 2022.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/38.83612874926405N85.98917529960828W>



Counties: Jackson, IN

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/1/office/31440.pdf	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Incidental take of the NLEB is not prohibited here. Federal agencies may consult using the 4(d) rule streamlined process. Transportation projects may consult using the programmatic process. See www.fws.gov/midwest/endangered/mammals/nleb/index.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

U.S. Department of
Homeland Security

United States
Coast Guard



Commander
Eighth Coast Guard District

1222 Spruce Street, Room 2.102D
St. Louis, MO 63103
Staff Symbol: (dwb)
Phone: (314) 269-2434
Email: allan.o.monterroza@uscg.mil

16211
July 9, 2019

Strand Associates, Inc.
Attn: Mr. Bryce Froderman, E.I.T.
629 Washington Street
Columbus, IN 47201

Subj: DES. NO. 1602277, SMALL STRUCTURE REPLACEMENT, STATE ROAD 39,
JACKSON COUNTY, INDIANA

Dear Mr. Froderman:

This is in response to your letter dated June 27, 2019 and corresponding information requesting whether the Coast Guard will require a permit and navigational lighting for the referenced bridge project. We have examined the proposed project area with regard to its status as a navigable water of the United States for purposes of Coast Guard bridge jurisdiction.

Our examination indicates that there is no sufficient factual support for concluding that the small structure, at the project location, has current or historic navigation occurring on this waterway. Since this is the case, a Coast Guard bridge permit or exemption will not be required for the referenced bridge project.

In consideration of the uses of the waterway, bridge lighting is not required.

Sincerely,

A handwritten signature in blue ink, appearing to read "Eric A. Washburn".

ERIC A. WASHBURN
Bridge Administrator, Western Rivers
By direction of the District Commander



Minor Projects PA Project Assessment Form – Category B Projects with Archaeology Work

Date: 12/3/19

Project Designation Number: 1602277

Route Number: SR 39

Project Description: Small Structure Replacement with Bridge, 2.14 miles north of SR 250

The existing temporary structure (CV #039-036-13.45) consists of three 36-inch diameter pipes constructed in 2016. This temporary structure replaced the original 64 inches by 43 inches two-barrel structure that was originally constructed in 1938. The existing structure is hydraulically inadequate. This section of SR 39 was last overlaid in 2005 as part of Des. No. 0400661 and is scheduled for HMA overlay in 2020 under Des. No. 1701251.

The preferred project alternative involves replacing the existing small structure with a four-sided precast concrete box structure. This alternative has been selected because the proposed structure skew and elimination of profile grade rise need. The need to acquire additional right-of-way is anticipated for ditch and shoulder work.

Feature crossed (if applicable): UNT of Pond Creek

Township: Brownstown Township

City/County: Jackson County

Information reviewed (please check all that apply):

- General project location map USGS map Aerial photograph Interim Report
- Written description of project area General project area photos Soil survey data
- Previously completed historic property reports Previously completed archaeology reports
- Bridge Inspection Information

Other (please specify): State Historic Architectural and Archaeological Research Database (SHAARD), Indiana Historic Buildings, Bridges, and Cemeteries (IHBBC) map; online street-view imagery; online property record cards: <https://jacksonin.wthgis.com/>; Abbreviated Engineer's Report (January 2019; Report on file, Indiana Department of Transportation)

Jackson, Christopher

2019 A Phase Ia Archaeological Records Check and Reconnaissance Survey for the Proposed Replacement of a Small Structure Where SR 39 Crosses an Unnamed Tributary of Pond Creek Approximately 2.14 miles north of SR 250 (Des 1602277), Brownstown Township, Jackson County, Indiana. Report on file, Indiana Department of Transportation, Cultural Resources Office, Indianapolis, In.

Results of the Records Review for Above-Ground Resources:

With regard to above-ground resources, an INDOT-Cultural Resources Office (CRO) historian examined a 0.25 mile radius Area of Potential Effects (APE). The Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) and the Indiana Historic Sites and Structures Inventory (IHSSI) information for Jackson County was checked by the CRO historian, who meets the Secretary of the Interior's Professional Qualification Standards per 36 CFR Part 61. The information was referenced through the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Mapping (IHBBM).

The following framework is used when analyzing the IHSSI properties. According to the IHSSI rating system, generally properties rated "contributing" do not possess the level of historical or architectural significance necessary to be considered individually National Register eligible, although they would contribute to a historic district. If they retain material integrity, properties rated "notable" might possess the necessary level of significance after further research. Properties rated "outstanding" usually possess the necessary level of significance to be considered National Register eligible, if they retain material integrity. Historic districts identified in the IHSSI are usually considered eligible for the National Register.

No National Register-listed, State Register-listed, or IHSSI properties are located within the APE for this small structure replacement. Much of the area within the APE is composed of agricultural fields, and large tracts of wooded land are located in the southern half of the APE. Several residences are within the APE, and they are described below based on written information and photographs obtained from online property record cards.

To the south of the small structure on the east side of SR 39 is an altered brick bungalow that would warrant an IHSSI rating of "contributing." To the south of the small structure on the west side of SR 39 is a farm complex with several barns/outbuildings. A late 19th century frame house is also present that would warrant an IHSSI rating of "contributing." It has some altered fenestration and is very deteriorated. The property record card indicates it has not been occupied in over 30 years and is in poor condition inside.

Three residences are located on the north side of SR 39 west of its intersection with CR E 300 S: a 1960s brick ranch house; a late 19th-early 20th century heavily altered frame house; and a modern 1990s house. Several houses are located on the south side of CR E 300 S east of its intersection with SR 39: a heavily altered early to mid-20th century frame house and a row of modern 1990s houses. All of them would be rated "non-contributing" per the IHSSI system.

The existing structure consists of three 36-inch diameter corrugated metal pipes constructed in 2016. This temporary structure replaced the original 64 inches by 43 inches two-barrel structure that was constructed in 1938. The structure exhibits no wood, stone, or brick structures or parts therein.

None of the properties within the APE appear to possess a high level of architectural or historical significance. Based on the available information, as summarized above, no above-ground concerns exist.

Archaeology Report Author/Date:

Christopher Jackson/November 11, 2019

Summary of Archaeology Investigation Results:

An archaeological records check and Phase Ia reconnaissance survey of the project area were conducted by Green 3 (Jackson 2019). The records check found that the project area had not been previously examined for archaeological resources and that no previously recorded sites have been identified within or adjacent to it. Because finalized construction design plans were not available, an area larger than the anticipated project construction footprint was surveyed to facilitate any reasonable construction design plan changes.

A 1.2 acre survey area was examined through the excavation of 18 shovel probes, pedestrian survey of an agricultural field with 30-50% surface visibility, and visual inspection of disturbed right-of-way. No evidence for archaeological deposits was identified. The report was reviewed by INDOT Cultural Resources personnel who meet the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61. It is our opinion that the report is acceptable, and we concur with the evaluations and recommendations made by Green 3 (Jackson 2019). Therefore, there are no archaeological concerns.

Does the project appear to fall under the Minor Projects PA? yes no

If yes, please specify category and number (**applicable conditions are highlighted**):

B-9. Installation, replacement, repair, lining, or extension of culverts and other drainage structures under the conditions listed below [**BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied**]:

Condition A (Archaeological Resources)

One of the two conditions listed below must be met (*EITHER Condition i or Condition ii must be satisfied*):

- i. Work occurs in previously disturbed soils; *OR*
- ii. **Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE.**

Condition B (Above-Ground Resources)

One of the conditions below must be met (*EITHER Condition i or Condition ii must be satisfied*):

- i. Work does not involve installation of a new culvert and other drainage structure, and there are no impacts to unusual features, including but not limited to historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and retaining walls, under one of the following conditions
(*Condition a, Condition b, or Condition c must be satisfied*):
 - a. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*
 - b. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*
 - c. The structure exhibits non-modern wood, stone, or brick structures or parts therein and the following conditions are met (*BOTH Condition 1 AND Condition 2 must be met*):
 - 1. Work does not occur adjacent to or within a National Register-listed or National Register eligible district or individual above-ground resource; *AND*
 - 2. The structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior's Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.
- ii. **Work involves the installation of a new culvert and other drainage structures AND/OR there may be impacts to unusual features, including historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and retaining walls, under the following conditions (*BOTH Condition a and Condition b must be satisfied*):**

a. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*

b. The subject structure exhibits one of the characteristics described below (*Condition 1, Condition 2 or Condition 3 must be satisfied*).

1. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*

2. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*

3. The structure exhibits non-modern wood, stone, or brick structures or parts therein but lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior's Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.

If no, please explain:

Additional comments:

INDOT Cultural Resources staff reviewer(s): Shaun Miller and Mary Kennedy

****Be sure to attach this form to the National Environmental Policy Act documentation for this project. Also, the NEPA documentation shall reference and include the description of the specific stipulation in the PA that qualifies the project as exempt from further Section 106 review.*

APPENDIX E
RED FLAG AND HAZARDOUS MATERIALS



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204-2216 (317) 232-5113 FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Date: January 17, 2019

To: Site Assessment & Management (SAM)
Environmental Policy Office, Environmental Services Division
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

From: Amber Porter, P.E.
Strand Associates, Inc.
629 Washington St. Columbus, IN
47201 amber.porter@strand.com

Re: RED FLAG INVESTIGATION
DES 1602277, State Project
Small Structure Replacement
State Road 39, 2.14 Miles N of SR 250
Jackson County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: This small structure replacement project is located on State Road 39 over an unnamed ditch, approximately 0.10 mile south of East County Road 300 South. The existing three-barrel culvert is 3-ft wide and has a span of 14-ft. It will be replaced with a three-sided flat top structure with increased skew. The project will also include the addition of guardrail and revetment riprap.

Bridge and/or Culvert Project: Yes No Structure # CV 039-036-13.45

If this is a bridge project, is the bridge Historical? Yes No , Select Non-Select

Proposed right of way: Temporary # Acres _____ Permanent # Acres 0.5 (anticipated)

Type of excavation: 5 feet for structure replacement (anticipated), 1 foot to 2 feet for road reconstruction (anticipated), 1-2 feet for ditch realignment (anticipated)

Maintenance of traffic: Maintenance of traffic will include a complete road closure with detour route.

Work in waterway: Yes No Above ordinary high water mark: Yes No

State Project: LPA:

Any other factors influencing recommendations: Project description subject to additional changes.

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities	N/A	Recreational Facilities	N/A
Airports ¹	N/A	Pipelines	N/A
Cemeteries	N/A	Railroads	N/A
Hospitals	N/A	Trails	N/A
Schools	N/A	Managed Lands	N/A

¹In order to complete the required airport review, a review of public airports within 3.8 miles (20,000 feet) is required.

No infrastructure resources were identified within the 0.5 mile search radius.

WATER RESOURCES TABLE AND SUMMARY

Water Resources			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	N/A	Canal Routes - Historic	N/A
Karst Springs	N/A	NWI - Wetlands	5
Canal Structures – Historic	N/A	Lakes	1
NPS NRI Listed	N/A	Floodplain - DFIRM	N/A
NWI-Lines	4	Cave Entrance Density	N/A
IDEM 303d Listed Streams and Lakes (Impaired)	N/A	Sinkhole Areas	N/A
Rivers and Streams	6	Sinking-Stream Basins	N/A

NWI-Lines: Four (4) NWI lines are located within the 0.5 mile search radius. The nearest NWI line is located approximately 0.20 mile southeast of the project area. No impact is expected.

Rivers and Streams: Six (6) rivers and streams are located within the 0.5 mile search radius. The nearest stream, unnamed, is located within the project area. A Waters of the US Report will be prepared and coordination with INDOT Ecology and Waterway Permitting will occur.

NWI-Wetlands: Five (5) wetlands are located within the 0.5 mile search radius. The nearest wetland is located approximately 0.18 mile southeast of the project area. No impact is expected.

Lakes: One (1) lake is located within the 0.5 mile search radius and is 0.48 mile northeast of the project area. No impact is expected.

URBANIZED AREA BOUNDARY SUMMARY

N/A

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	N/A	Mineral Resources	N/A
Mines – Surface	N/A	Mines – Underground	N/A

No mining and mineral exploration facilities were identified within the 0.5 mile search radius.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	N/A	Manufactured Gas Plant Sites	N/A
RCRA Generator/ TSD	N/A	Open Dump Waste Sites	N/A
RCRA Corrective Action Sites	N/A	Restricted Waste Sites	N/A
State Cleanup Sites	N/A	Waste Transfer Stations	N/A
Septage Waste Sites	N/A	Tire Waste Sites	N/A
Underground Storage Tank (UST) Sites	N/A	Confined Feeding Operations (CFO)	N/A
Voluntary Remediation Program	N/A	Brownfields	N/A
Construction Demolition Waste	N/A	Institutional Controls	N/A
Solid Waste Landfill	N/A	NPDES Facilities	N/A
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	N/A
Leaking Underground Storage (LUST) Sites	N/A	Notice of Contamination Sites	N/A

No hazardous material concerns were identified within the 0.5 mile search radius.

ECOLOGICAL INFORMATION SUMMARY

The Jackson County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did not indicate the presence of ETR species. Coordination with USFWS and IDNR will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project is located in a rural area surrounded by farm fields, some residences, and some wooded areas. The June 22, 2017, inspection report for Culvert # 039-036-13.45 states that no evidence of bats was seen or

heard in the culvert. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects."

An inquiry using the USFWS Information for Planning and Consultation (IPaC) website did not indicate the presence of the federally endangered species, the Rusty Patched Bumble Bee, in or within 0.5 mile of the project area. No impact is expected.

RECOMMENDATIONS SECTION

INFRASTRUCTURE: N/A

WATER RESOURCES: The presence of the following water resources will require the preparation of a Waters of the US Report and coordination with INDOT ES Ecology and Waterway Permitting:

One stream segment, unnamed, flows through the project area.

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: N/A

HAZMAT CONCERNS: N/A

ECOLOGICAL INFORMATION: Coordination with USFWS and IDNR will occur. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects."

INDOT Environmental Services concurrence: _____

Marlene Mathas
Digitally signed by Marlene Mathas
Date: 2019.01.17 13:05:54 -05'00' (Signature)

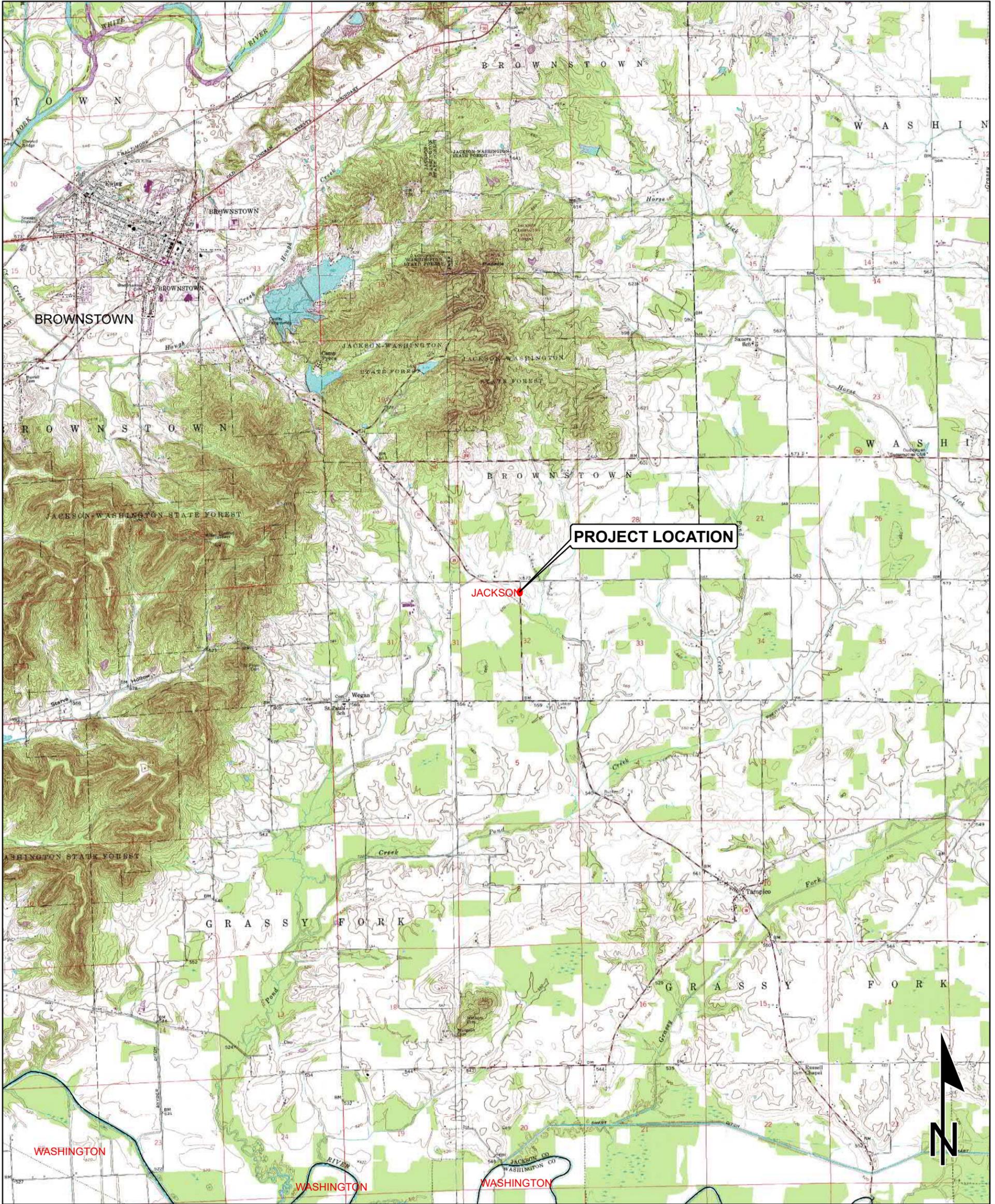
Prepared by:
Amber Porter, P.E.
Project Engineer
Strand Associates, Inc.

Graphics:

A map for each report section with a 0.5 mile search radius buffer around all project area(s) showing all items identified as possible items of concern is attached.

SITE LOCATION: YES
INFRASTRUCTURE: N/A
WATER RESOURCES: YES
URBANIZED AREA BOUNDARY: N/A
MINING/MINERAL EXPLORATION: N/A
HAZMAT CONCERNS: N/A

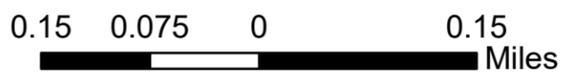
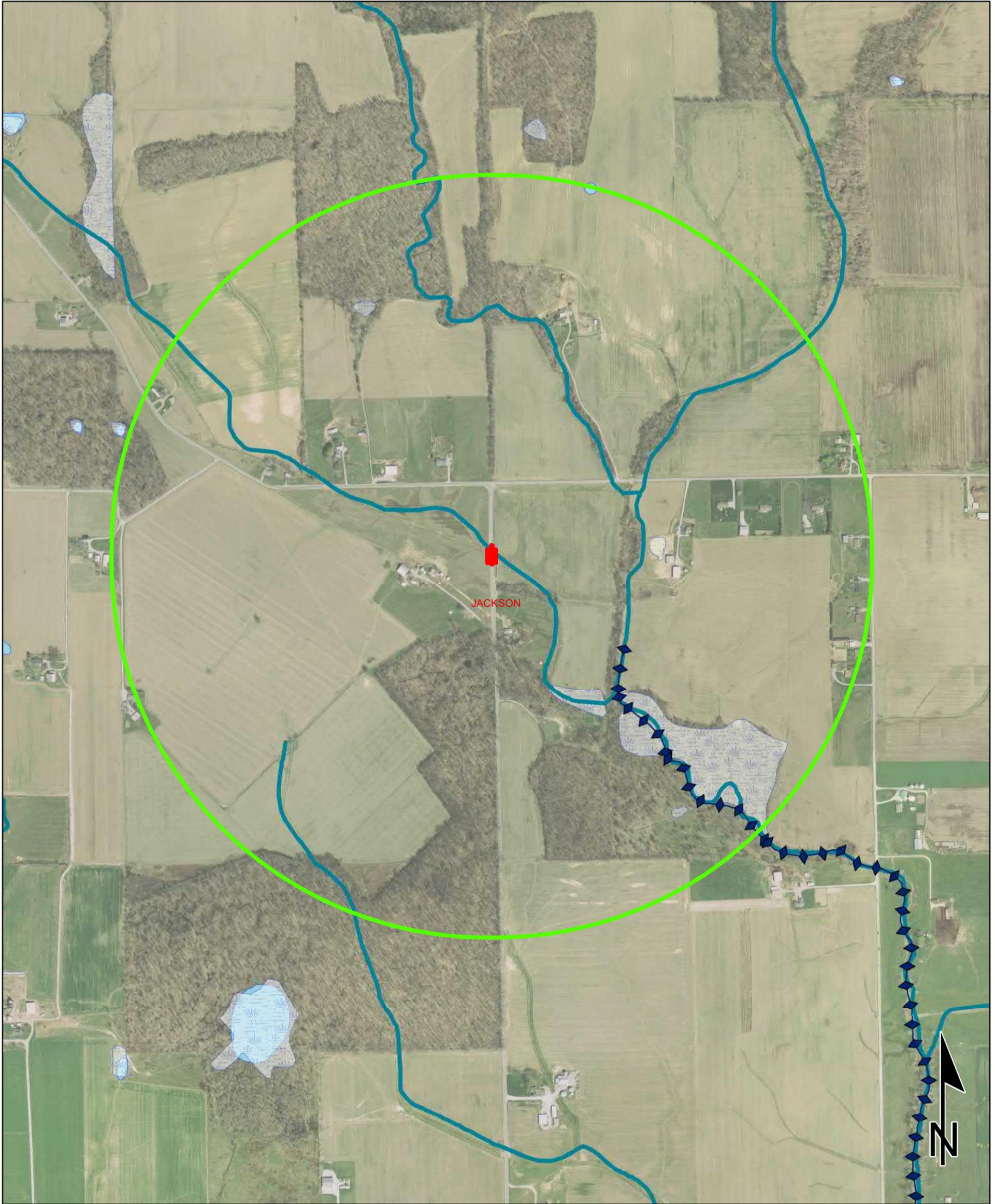
Red Flag Investigation - Site Location
 State Road 39, Small Structure Replacement
 Des. No. 1602277
 Jackson County, Indiana



Sources: 1 0.5 0 1 Miles
Non Orthophotography
 Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
 Map Projection: UTM Zone 16 N Map Datum: NAD83
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

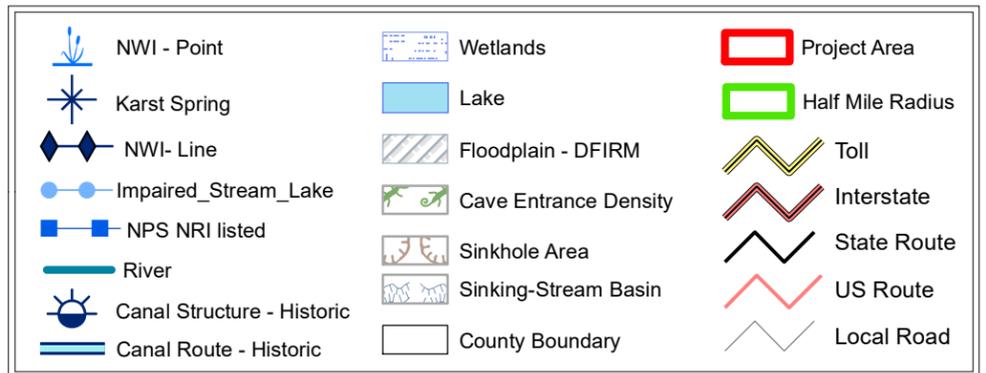
**TAMPICO QUADRANGLE
 INDIANA
 7.5 MINUTE SERIES
 (TOPOGRAPHIC)**

Red Flag Investigation - Water Resources
 State Road 39, Small Structure Replacement
 Des. No. 1602277
 Jackson County, Indiana



Sources:
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.



Indiana County Endangered, Threatened and Rare Species List

County: Jackson

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Cyprogenia stegaria	Eastern Fanshell Pearlymussel	LE	SE	G1Q	S1
Epioblasma torulosa torulosa	Tubercled Blossom	LE	SE	G2TX	SX
Lampsilis fasciola	Wavyrayed Lampmussel		SSC	G5	S3
Obovaria subrotunda	Round Hickorynut	C	SE	G4	S1
Pleurobema clava	Clubshell	LE	SE	G1G2	S1
Pleurobema cordatum	Ohio Pigtoe		SSC	G4	S2
Pleurobema plenum	Rough Pigtoe	LE	SE	G1	S1
Pleurobema pyramidatum	Pyramid Pigtoe		SE	G2G3	SX
Ptychobranhus fasciolaris	Kidneyshell		SSC	G4G5	S2
Quadrula cylindrica cylindrica	Rabbitsfoot	LT	SE	G3G4T3	S1
Villosa lienosa	Little Spectaclecase		SSC	G5	S3
Insect: Odonata (Dragonflies & Damselflies)					
Epiheca canis	Beaverpond Baskettail		SE	G5	S1
Rhionaeschna mutata	Spatterdock Darner		ST	G4	S2S3
Fish					
Notropis ariommus	Popeye Shiner			G3	SX
Amphibian					
Hemidactylium scutatum	Four-toed Salamander		SSC	G5	S2
Lithobates pipiens	Northern Leopard Frog		SSC	G5	S2
Reptile					
Clonophis kirtlandii	Kirtland's Snake	C	SE	G2	S2
Crotalus horridus	Timber Rattlesnake		SE	G4	S2
Kinosternon subrubrum subrubrum	Eastern Mud Turtle		SE	G5T5	S2
Nerodia erythrogaster neglecta	Copperbelly Water Snake	PS:LT	SE	G5T3	S2
Opheodrys aestivus	Rough Green Snake		SSC	G5	S3
Terrapene carolina carolina	Eastern Box Turtle		SSC	G5T5	S3
Bird					
Accipiter striatus	Sharp-shinned Hawk		SSC	G5	S2B
Aimophila aestivalis	Bachman's Sparrow			G3	SXB
Ammodramus henslowii	Henslow's Sparrow		SE	G4	S3B
Ardea alba	Great Egret		SSC	G5	S1B
Bartramia longicauda	Upland Sandpiper		SE	G5	S3B
Buteo lineatus	Red-shouldered Hawk		SSC	G5	S3
Buteo platypterus	Broad-winged Hawk		SSC	G5	S3B
Certhia americana	Brown Creeper			G5	S2B
Cistothorus palustris	Marsh Wren		SE	G5	S3B
Cistothorus platensis	Sedge Wren		SE	G5	S3B
Coragyps atratus	Black Vulture			G5	S1N,S2B
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting
State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list
GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank
SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: Jackson

Species Name	Common Name	FED	STATE	GRANK	SRANK
<i>Helmitheros vermivorus</i>	Worm-eating Warbler		SSC	G5	S3B
<i>Ixobrychus exilis</i>	Least Bittern		SE	G5	S3B
<i>Lanius ludovicianus</i>	Loggerhead Shrike		SE	G4	S3B
<i>Mniotilta varia</i>	Black-and-white Warbler		SSC	G5	S1S2B
<i>Nyctanassa violacea</i>	Yellow-crowned Night-heron		SE	G5	S2B
<i>Pandion haliaetus</i>	Osprey		SE	G5	S1B
<i>Rallus elegans</i>	King Rail		SE	G4	S1B
<i>Setophaga cerulea</i>	Cerulean Warbler		SE	G4	S3B
<i>Tyto alba</i>	Barn Owl		SE	G5	S2
<i>Wilsonia citrina</i>	Hooded Warbler		SSC	G5	S3B
Mammal					
<i>Myotis sodalis</i>	Indiana Bat or Social Myotis	LE	SE	G2	S1
<i>Nycticeius humeralis</i>	Evening Bat		SE	G5	S1
<i>Sorex hoyi</i>	Pygmy Shrew		SSC	G5	S2
<i>Taxidea taxus</i>	American Badger		SSC	G5	S2
Vascular Plant					
<i>Acalypha deamii</i>	Mercury		SR	G4?	S2
<i>Cabomba caroliniana</i>	Carolina Fanwort		SX	G5	SX
<i>Carex atlantica</i> ssp. <i>atlantica</i>	Atlantic Sedge		ST	G5T5	S2
<i>Carex seorsa</i>	Weak Stellate Sedge		SR	G5	S2
<i>Carex straminea</i>	Straw Sedge		ST	G5	S2
<i>Chelone obliqua</i> var. <i>speciosa</i>	Rose Turtlehead		WL	G4T3	S3
<i>Epilobium ciliatum</i>	Hairy Willow-herb		SX	G5	SX
<i>Hydrastis canadensis</i>	Golden Seal		WL	G3G4	S3
<i>Juglans cinerea</i>	Butternut		WL	G4	S3
<i>Magnolia acuminata</i>	Cucumber Magnolia		SE	G5	S1
<i>Mikania scandens</i>	Climbing Hempweed		SE	G5	S1
<i>Najas gracillima</i>	Thread-like Naiad		ST	G5?	S1
<i>Panax quinquefolium</i>	American Ginseng		WL	G3G4	S3
<i>Panicum bicknellii</i>	A Panic-grass		SE	G4?Q	S1
<i>Platanthera flava</i> var. <i>flava</i>	Southern Rein Orchid		SE	G4?T4?Q	S1
<i>Poa paludigena</i>	Bog Bluegrass		WL	G3	S3
<i>Rubus alumnus</i>	A Bramble		SX	G5	SX
<i>Rubus centralis</i>	Illinois Blackberry		SE	G2?Q	S1
<i>Rubus odoratus</i>	Purple Flowering Raspberry		ST	G5	S2
High Quality Natural Community					
Barrens - bedrock siltstone	Siltstone Glade		SG	G2	S2
Forest - floodplain mesic	Mesic Floodplain Forest		SG	G3?	S1
Forest - floodplain wet	Wet Floodplain Forest		SG	G3?	S3
Forest - floodplain wet-mesic	Wet-mesic Floodplain Forest		SG	G3?	S3

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
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SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: Jackson

Species Name	Common Name	FED	STATE	GRANK	SRANK
Forest - upland dry-mesic Highland Rim	Highland Rim Dry-mesic Upland Forest			GNR	S3
Forest - upland mesic Bluegrass	Bluegrass Mesic Upland Forest			GNR	S3
Forest - upland mesic Highland Rim	Highland Rim Mesic Upland Forest			GNR	S3
Wetland - seep acid	Acid Seep		SG	GU	S1
Other Significant Feature					
Geomorphic - Nonglacial Erosional Feature - Water Fall and Cascade	Water Fall and Cascade			GNR	SNR

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting
State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list
GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank
SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

National Flood Hazard Layer FIRMette



38°50'24.63"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>

OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
		Area of Undetermined Flood Hazard <i>Zone D</i>

GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
OTHER FEATURES		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature

MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **10/9/2019 at 10:49:34 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



38°49'56.61"N

INdiana Floodplain Information Portal



Find an address

Example: 300 Michigan Avenue, Auburn, IN, 46706

Go To Address

Jump to a county

- or - Select your county from below

Adams ▾

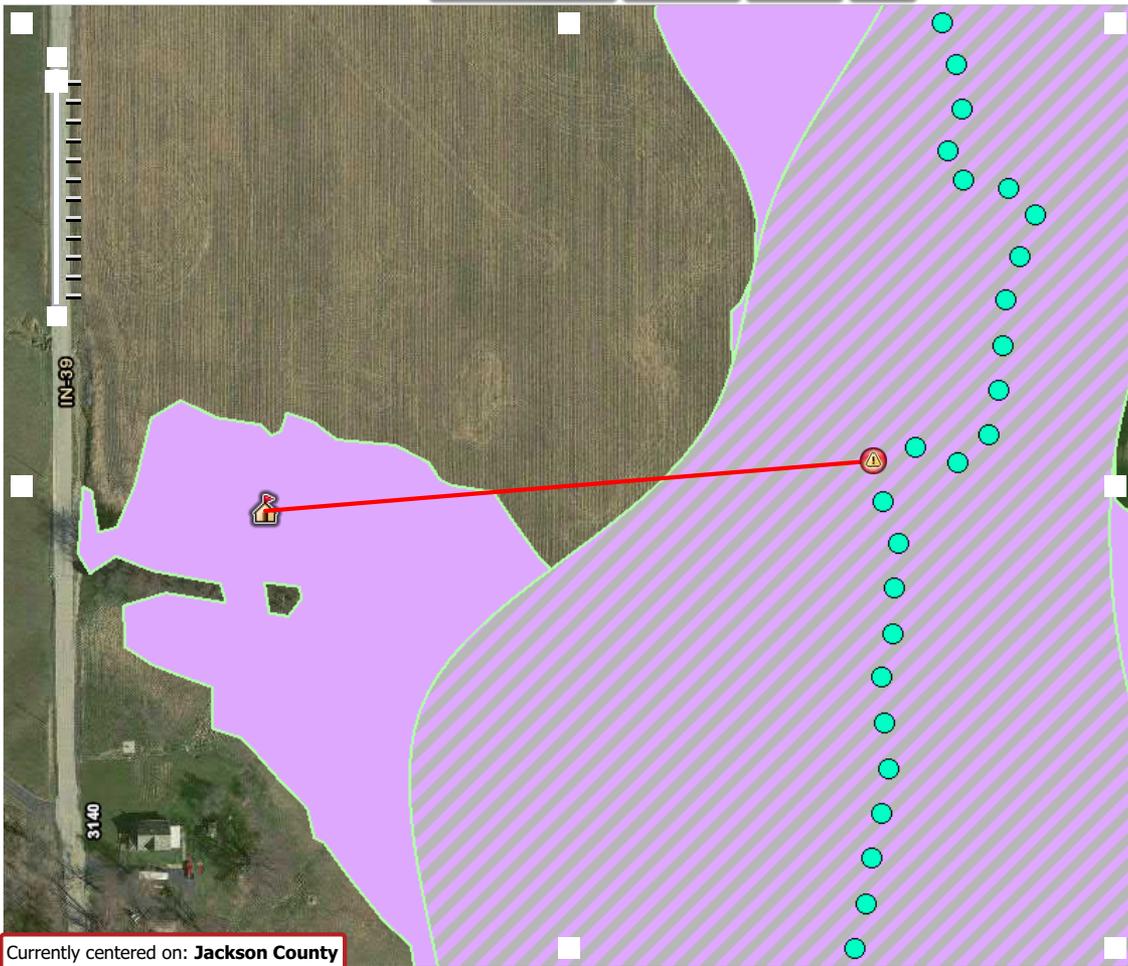
Want to use the [eFARA Wizard](#) to submit a floodplain information request to the State of Indiana, IDNR, Division of Water?

[< Previous Tips](#) [Next Tips >](#)

Map
FEMA Flood Insurance Study
Floodplain Layers
Frequently Asked Questions

Minimize

Profile Charter
Layers
Legend
Help



Currently centered on: **Jackson County**

Click on the map or enter an address to view Floodplain Information at that Point of Interest. [Click to return to the instructions](#)

Below is the available floodplain information for your Point of Interest. If you would like to request a Floodplain Analysis / Regulatory Assessment (FARA) from the IDNR, Division of Water, click on "eFARA Wizard".

Point of Interest

Approximate Address:
3091 State Rd 39, BROWNSTOWN, IN, 47220

Effective Flood Zone:
Effective Zone X

Approximate Flooding Elevation:
560.5ft NAVD88

Source:
Zone A Model Delineation

Distance from click:
849 ft

Nearest Stream:
UNNAMED TRIBUTARY POND CREEK

eFARA Wizard

Local Ordinance Information

Local floodplain regulations may be more restrictive than that of federal and state government. **ALL REGULATIONS MUST BE MET.** Please contact your local floodplain administrator for further information.

Floodplain Administrator:
Conner Barnette
Title:
Building Commissioner
Phone Number: (812) 358-6109
E-Mail: cbarnette@jacksoncounty.in.gov

Download Report

Flood Zone Type: Best Available ▾

[Download Report](#)

Froderman, Bryce

From: Brunn, Eric
Sent: Thursday, November 7, 2019 1:55 PM
To: Froderman, Bryce; Rodriguez, Brandi
Subject: FW: APPROVED: WOTUS rpt, SR 39 Small Str Rplcmnt, 2.14 miles S of SR 250 over UNT to Pond Crk , Jackson Co, Des 1602277
Attachments: Approved WOTUS rpt 1602277 SR39 Pond Cr 11-7-2019.pdf; Permit Determination Questionnaire V4 11_7_2019.docx

From: Sperry, Steve <SSPERRY@indot.IN.gov>
Sent: Thursday, November 7, 2019 12:52 PM
To: Cory Shumate <corys@metricenv.com>; Williamson, Brad <BWILLIAMSON@indot.IN.gov>
Cc: Rehder, Crystal <CRehder@indot.IN.gov>; Alex Gray <alexg@metricenv.com>; Amy Smith <amys@metricenv.com>; Brunn, Eric <Eric.Brunn@strand.com>; Kang, Li <LKANG@indot.IN.gov>
Subject: APPROVED: WOTUS rpt, SR 39 Small Str Rplcmnt, 2.14 miles S of SR 250 over UNT to Pond Crk , Jackson Co, Des 1602277

Cory,

Thank you for submitting the waters report for the above referenced project. Some of my original comments were incorrect. I appreciate the tact and approach used in conveying this to me.

Brad

The approved 11/7/2019 report is attached and can also be found on ProjectWise through this link: [Approved WOTUS rpt 1602277 SR39 Pond Cr 11-7-2019.pdf](#) *It is the responsibility of the Project Manager to forward a copy of this report to the Project Designer.*

The information in this report should be used by the Project Designer to determine if waters of the U.S. will be impacted by the project. Avoidance and minimization of impacts must occur *before* mitigation will be considered. If mitigation is required, the Project Manager or Project Designer must coordinate with the Ecology and Waterway Permitting Office to discuss how adequate compensatory mitigation will be provided.

This email serves as notice that the Project Designer is to complete the standard Permit Determination Questionnaire (refer to attached) as soon as all required information is obtained. It will need to be submitted to Steve Sperry so that a permit determination can be made.

The Project Manager should notify the Ecology and Waterway Permitting Office if there is any change to the project footprint presented in this report. Such changes may require additional fieldwork and submittal of an updated waters report covering areas not previously investigated. *This report is only valid for a period of five years from the date of earliest fieldwork.* If the report expires prior to waterway permit application submittal, additional fieldwork and a revised waters report will be required.

This waters report will not be sent to the United States Army Corps of Engineers (USACE) or the Indiana Department of Environmental Management (IDEM) until the waterways permit applications are submitted to these agencies.

Thanks
Steve

Stephen C. Sperry

Ecology and Permits Coordinator

Division of Environmental Services

IGCN Room 642

100 N. Senate Ave.

Indianapolis, IN 46204

Office: (317) 232-5206

Email: ssperry@indot.in.gov



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Stephen C. Sperry

Ecology and Permits Coordinator

Multidistrict East Team

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Indianapolis, IN 46204
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Email: ssperry@indot.in.gov



WATERS DETERMINATION REPORT

S.R. 39 OVER UNT TO POND CREEK
SMALL STRUCTURE REPLACEMENT
DES. NO. 1602277

WASHINGTON TOWNSHIP, JACKSON COUNTY, INDIANA

Prepared for:
Strand Associates, Inc.

November 7, 2019



Prepared by:

Metric Environmental, LLC

Complex Environment. Creative Solutions.

6971 Hillside Court
Indianapolis, IN 46256
Telephone: 317.207.4286
www.metricenv.com

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S.R. 39 over UNT to Pond Creek
Small Structure Replacement
Washington Township, Jackson County, Indiana
Des. No. 1602277
Metric Project No. 18-0008-4



WATERS OF THE U.S. DETERMINATION REPORT
S.R. 39 Over UNT to Pond Creek
Washington Township, Jackson County, Indiana
Des. No. 1602277
Prepared By: Cory Shumate, Metric Environmental, LLC
November 7, 2019

Date of Waters Field Investigation: August 1, 2019

Location:

Section 32; Township 5 North; Range 5 East
Tampico, IN 7.5-minute USGS Topographic Quadrangle (**Exhibit 2**)
Washington Township, Jackson County, Indiana
12-Digit HUC Watershed: 051202070903
Latitude: 38.83618 Longitude: -85.98922

FEMA Flood Insurance Rate Map (FIRM):

No mapped floodplains are located within the project study limits (PSL). The nearest floodplain, identified as Zone A, an area subject to inundation by the 1 percent annual chance of flood, was located approximately 1.7 mi. south and corresponded with Pond Creek. The FIRM map for this area is provided as **Exhibit 3**.

National Wetlands Inventory (NWI) Information:

One mapped NWI polygon was located within the PSL and was identified as Riverine, Intermittent, Streambed, Seasonally Flooded stream (R4SBC). This feature corresponds to unnamed tributary (UNT) to Pond Creek. The NWI map is provided as **Exhibit 4**.

Karst Feature Information:

No mapped karst features were found within 0.5 mi. of the PSL during the desktop review.

USGS National Hydrography Dataset (NHD) Information:

One mapped NHD flowline was located within the PSL and was classified as a stream feature. This feature was also identified as an intermittent stream on the Tampico, IN 7.5-minute USGS Topographic Quadrangle. The NHD flowline corresponds with UNT to Pond Creek and was observed during field reconnaissance. The NHD map is provided in **Exhibit 4**.

Soils:

According to the Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Jackson County, Indiana, the PSL contained three mapped soil units, listed in the table below. The NRCS soil survey map is provided as **Exhibit 4**.

Symbol	Map unit name	Hydric Rating (%)
HccB2	Haubstadt silt loam, 2 to 6 percent slopes, eroded	Not Hydric
StaAQ	Steff silt loam, 0 to 2 percent slopes, rarely flooded	Hydric (2)
StdAQ	Stendal silt loam, 0 to 2 percent slopes, rarely flooded	Hydric (2)

Attached Documents:

- Maps of the project area (**Exhibits 1-5**)
- Photo Location Map (**Exhibit 6**)
- Site Photographs
- Wetland Determination Data Form(s)
- Preliminary Jurisdictional Determination Form

Project Description:

The proposed project (Des. No. 1602277) includes replacing the small structure, S.R. 39 over UNT to Pond Creek in Washington Township, Jackson County, Indiana. Specifically, the project is located in Section 32, Township 5 North, Range 5 East.

Field Reconnaissance:

The wetland determination field visit was conducted on August 1, 2019 by Darin Gates and Cory Shumate of Metric Environmental, LLC. The PSL consist of the area that has the potential to be impacted, based on the provided design scenario. This area was evaluated for the presence of wetlands and Waters of the United States. This investigation was conducted in accordance with the 1987 U.S. Army Corps of Engineers (USACE) *Wetland Delineation Manual* and the August 2010 *Midwest Regional Supplement (version 2.0) Manual*.

A Location Map showing the project location is provided as **Exhibit 1**. The proposed project is located in southeastern Jackson County, Indiana, on S.R. 39 approximately 345 ft. south of the intersection of S.R. 39 and E. C.R. 300 S. The PSL extend approximately 510 ft. along S.R. 39 and approximately 80 ft. from the S.R. 39 centerline. An aerial map of sampling points and water features is provided as **Exhibit 5**. A photo location map is provided as **Exhibit 6** and site photographs are attached.

The site was investigated for evidence of hydrophytic vegetation, hydric soil, and wetland hydrology to determine if the project impacts wetlands and other Waters of U.S. The sampling point (SP) locations were chosen in possible wetland areas within the PSL. The upland areas consisted of deciduous forest, open field, and agricultural crop fields. Upland areas where sampling points were not taken, were investigated and determined to be upland due to upward sloping topography and presence of dominant upland vegetation. Four sampling points were recorded on the USACE Wetland Determination Data Forms and shown on **Exhibit 5**, provided the following information:

S.R. 39 over UNT to Pond Creek
 Small Structure Replacement
 Washington Township, Jackson County, Indiana
 Des. No. 1602277
 Metric Project No. 18-0008-4



**Sampling Plot Data Summary Table
S.R. 39 over UNT to Pond Creek
Small Structure Replacement
Washington Township, Jackson County, Indiana
Des. No. 1602277**

Plot #	Photo #s	Lat/Long	Hydrophytic Vegetation	Hydic Soils	Wetland Hydrology	Within Wetland
SP-1	1-3	38.836546 -85.989385	No	Yes	No	No
SP-2	4-6	38.83606 -85.98915	No	No	No	No
SP-3	7-9	38.836005 -85.989078	No	No	No	No
SP-4	10-12	38.835873 -85.989084	Yes	Yes	Yes	Yes, Fringe Wetland within UNT to Pond Creek bank full width

Wetlands:

No wetlands above the bank full width of streams were observed within the PSL.

Additional Sampling Points:

Three additional sampling points were taken in areas where a wetland was suspected but did not meet the three required wetland criteria. One sampling point was taken in an area suspected of being a fringe wetland below the bank full width of UNT to Pond Creek but above the Ordinary High-Water Mark (OHWM) of UNT to Pond Creek. Descriptions of these sampling points are included below.

Sampling Point 1 (SP-1)

SP-1 was located in a pasture north of UNT to Pond Creek and west of S.R. 39. The dominant vegetation at this sampling point was red fescue (*Festuca rubra*, FACU) in the herb stratum. This did not meet the criteria for hydrophytic vegetation. From 0 to 20 in., the soils in the test pit were a silt loam. From 0 to 16 in., the soil exhibited a matrix color of 10YR 7/2 (90 percent) with 10YR 6/4 (10 percent) distinct redox concentrations in the matrix. From 16 to 20 in., the soil exhibited a mixed matrix color of 10YR 6/4 (45 percent) and 10YR 5/6 (45 percent) with 10YR 6/8 (5 percent) prominent redox concentrations in the matrix and 10YR 3/4 (5 percent) distinct redox concentrations in the matrix. This met the hydric soil indicator of depleted matrix (F3). No primary or secondary indicators of wetland hydrology were observed during the field reconnaissance. Since only one of the three required wetland criteria were met, this area did not qualify as a wetland.

Sampling Point 2 (SP-2)

SP-2 was located on a hillslope east of S.R. 39 and west of UNT to Pond Creek. The dominant vegetation at this sampling point was red fescue (*Festuca rubra*, FACU) and rice cut grass (*Leersia oryzoides*, OBL) in the herb stratum. This did not meet the criteria for hydrophytic vegetation. To a depth of 20 in., the soils in the test pit were a silt loam. From 0 to 10 in., the soil exhibited a mixed matrix color of 10YR 7/4 (50 percent) and 10YR 6/3 (45 percent) with 10YR 6/8 (5 percent) prominent redox concentrations within the matrix. From 10 to 20 in., the soil exhibited a matrix color of 10YR 6/3 (90 percent) with 10YR 5/8 (10 percent) prominent redox concentrations in the matrix. This did not meet any of the indicators for hydric soils. No primary or secondary indicators of wetland hydrology were observed during the field reconnaissance. Since none of the three required wetland criteria were met, this area did not qualify as a wetland.

Sampling Point 3 (SP-3)

SP-3 was located at the top of a hillslope, near row crop fields north of UNT to Pond Creek. The dominant vegetation at this sampling point was American elm (*Ulmus americana*, FACW) and black walnut (*Juglans nigra*, FACU) in the tree stratum; black walnut (*Juglans nigra*, FACU) in the sapling/shrub stratum; and wild cucumber (*Echinocystis lobata*, FACW), Queen Anne's lace (*Daucus carota*, UPL), hedge false bindweed (*Calystegia sepium*, FAC), and Japanese bristle grass (*Setaria faberi*, FACU) in the herb stratum. This did not meet any of the indicators for hydrophytic vegetation. To a depth of 20 in., the soil in the test pit was a silt loam. From 0 to 20 in., the soil exhibited a matrix color of 10YR 5/4 (80 percent) with 10YR 6/6 (10 percent) distinct redox concentrations and 10YR 6/3 (10 percent) faint redox concentrations. This did not meet any of the indicators for hydric soil. No primary or secondary indicators of wetland hydrology were observed during the field reconnaissance. Since none of the three required wetland criteria were met, this area did not qualify as a wetland.

Sampling Point 4 (SP-4) – Fringe Wetland of UNT to Pond Creek.

SP-4 was located within a fringe wetland, located below the bank full width of UNT to Pond Creek but above the stream's OHWM, on the stream's east bank. The dominant vegetation at this sampling point was American elm (*Ulmus americana*, FACW) in the tree stratum; black walnut (*Juglans nigra*, FACU) in the sapling/shrub stratum; and late goldenrod (*Solidago gigantea*, FACW) and mild water pepper (*Persicaria hydropiper*, OBL) in the herb stratum. This met the hydrophytic vegetation indicators of dominance test (75 percent) and prevalence index (2.04). To a depth of 2 in., the soil in the test pit was a sand loam. From 2 to 15 in., the soils in the test pit were a silt loam. A restrictive layer of gravel prevented further excavation below 15 in. From 0 to 2 in., the soil exhibited a matrix color of 10YR 4/1 (90 percent) with 10YR 2/1 (10 percent) faint redox concentrations in the matrix. From 2 to 11 in., the soil exhibited a matrix color of N 7/ (65 percent) with 7.5YR 5/6 (35 percent) prominent redox concentrations. From 11 to 15 in., the soil exhibited a matrix color of N 6/ (85 percent) with 10YR 5/6 (15 percent) prominent redox concentrations in the matrix. This met the hydric soil indicator of loamy gleyed matrix (F2). Three indicators of wetland hydrology were observed: saturation (A3), geomorphic position (D2) due to SP-A1's location on a stream bank with concave local relief, and FAC-neutral test (D5). Since

all three required wetland criteria were met, this area qualified as a wetland. However, since this wetland was a feature to the stream, it was not included as a separate wetland feature for this report.

Streams:

One stream, UNT to Pond Creek, was observed within the PSL during the field reconnaissance. A description of the stream is provided below.

**Stream Summary Table
S.R. 39 over UNT to Pond Creek
Small Structure Replacement
Washington Township, Jackson County, Indiana
Des. No. 1602277**

Stream Name	Photos	Lat/Long	OHWM Width	OHWM Depth	USGS Blue-line	Riffles Pools	Quality	Likely Water of the U.S.	Dominant Substrate	Potential Stream Impact
			ft.	ft.						ft.
UNT to Pond Creek	2, 3, 8, 9, 11, 12, 13, 14, 16, 18, 20, 22, 23	38.836241 -85.989123	6	0.5	Yes (Intermittent)	No	Poor	Yes	Silt, Artificial	382.9

UNT to Pond Creek (382.9 LFT)

UNT to Pond Creek flows from northwest to southeast and is approximately 382.9 linear feet (0.053 acre) within the PSL. UNT to Pond Creek flows southeast into Pond Creek, which flows southwest into the Muscatatuck River, which flows west into East Fork White River, a Section 10 TNW. Therefore, UNT to Pond Creek should be considered a jurisdictional Water of the U.S. UNT to Pond Creek was associated with a dashed blue line on the USGS topographic map, indicating that it is intermittent. UNT to Pond Creek was associated with an NWI mapped polygon identified as R4SBC. The OHWM was an average of 6 ft. wide and 0.5 ft. deep within the PSL. Measurements of OHWM were collected 240-250 ft. downstream of the culvert outlet and 50 ft. upstream of the culvert inlet. All OHWM measurements taken were outside the influence of the structure. The bank full width was approximately 8 ft. wide and approximately 6 ft. deep. The adjacent land use to UNT to Pond Creek was pasture west of S.R. 39 and immature forest and agricultural crop fields and immature forest east of S.R. 39. The dominant stream substrate consisted of silt and artificial riprap. The stream exhibited no sinuosity and slow flow west of S.R. 39 and fair sinuosity and intermittent flow east of S.R. 39. Overhanging vegetation, woody debris, and root wads were the instream cover present. One fringe wetland, identified as below the bank full width of UNT to Pond Creek but above the stream’s OHWM, was observed. The fringe wetland was approximately 0.002 ac. and entirely contained within the PSL. The dominant vegetation

S.R. 39 over UNT to Pond Creek
Small Structure Replacement
Washington Township, Jackson County, Indiana
Des. No. 1602277
Metric Project No. 18-0008-4



within this fringe wetland was American elm (*Ulmus americana*, FACW) in the tree stratum; black walnut (*Juglans nigra*, FACU) in the sapling/shrub stratum; and tall goldenrod (*Solidago gigantea*, FACW) and mild water-pepper (*Persicaria hydropiper*, OBL) in the herb stratum. No aquatic organisms were found in the stream. According to USGS *Indiana StreamStats*, the drainage area upstream of UNT to Pond Creek at the PSL is 0.605 square mile. Qualities of the stream listed above contribute to this stream being classified as poor quality.

Roadside Ditches:

No roadside ditches were identified within the PSL during the field reconnaissance.

Culverts and Drains:

Two culverts were identified within the PSL. Both culverts consisted of corrugated metal pipes (CMP). Culvert 1 consisted of three CMP in order to convey UNT to Pond Creek under S.R. 39. Culvert 2 was a CMP which conveyed roadside drainage under S.R. 39 and into UNT to Pond Creek. Locations of these culverts are shown in **Exhibit 5**, **Exhibit 6**, and attached photosheet.

Conclusion:

One stream, UNT to Pond Creek, totaling 382.9 linear feet, was identified within the PSL. This stream is likely Waters of the U.S. The final determination of jurisdictional waters is ultimately made by the USACE. This report is our best judgment based on the guidelines set forth by USACE. Every effort should be taken to avoid and minimize impacts to the waterway and wetlands. If impacts are necessary, then mitigation might be required. The INDOT Environmental Services Division should be contacted immediately if impacts will occur.

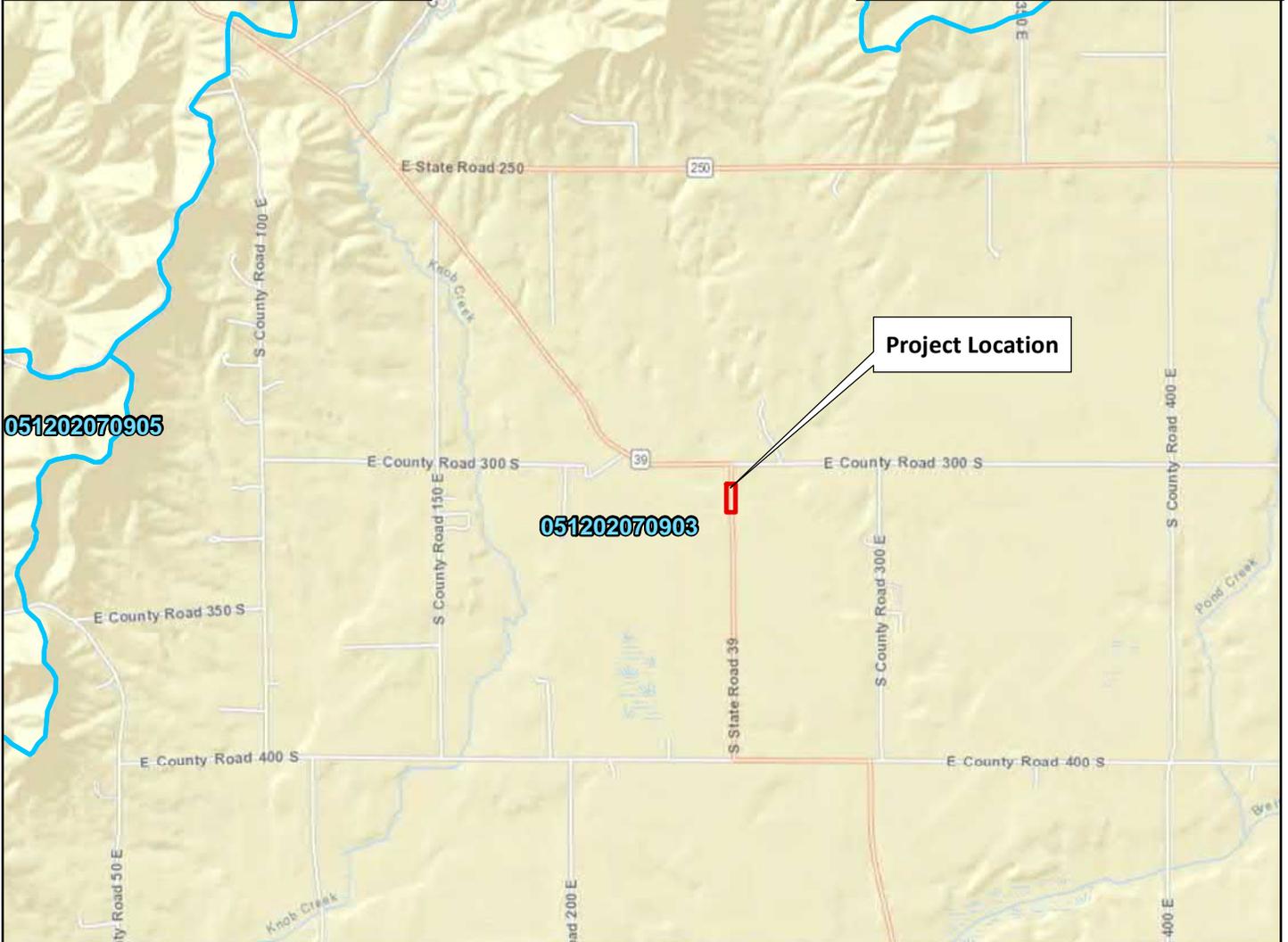
Acknowledgements:

This waters determination has been prepared based on the best available information, interpreted in light of the investigator’s training, experience and professional judgement in conformance with the 1987 Corps of engineers Wetlands Delineation Manual, the appropriate regional supplement, the USACE Jurisdictional Determination Form Instructional Guidebook, and other appropriate agency guidelines.

Metric Environmental Staff	Position	Contributing Effort	Signature/Date
Amy Noel Smith	Natural Resources Project Manager II	Project Manager	<i>Amy Noel Smith</i> 11/7/19
Alex Gray	Natural Resources Project Manager I	QAQC	<i>Alex M. Gray</i> 11/7/19
Cory Shumate	Environmental Scientist 2	Report Preparation, Field Data Collection	<i>C Shumate</i> 11/7/19
Darin Gates	Environmental Intern	Field Data Collection	<i>Darin Gates</i> 11/7/19

APPROVED

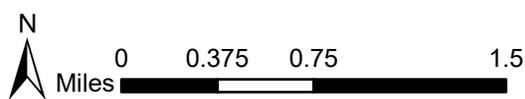
By Stephen C. Sperry at 11:06 am, Nov 07, 2019



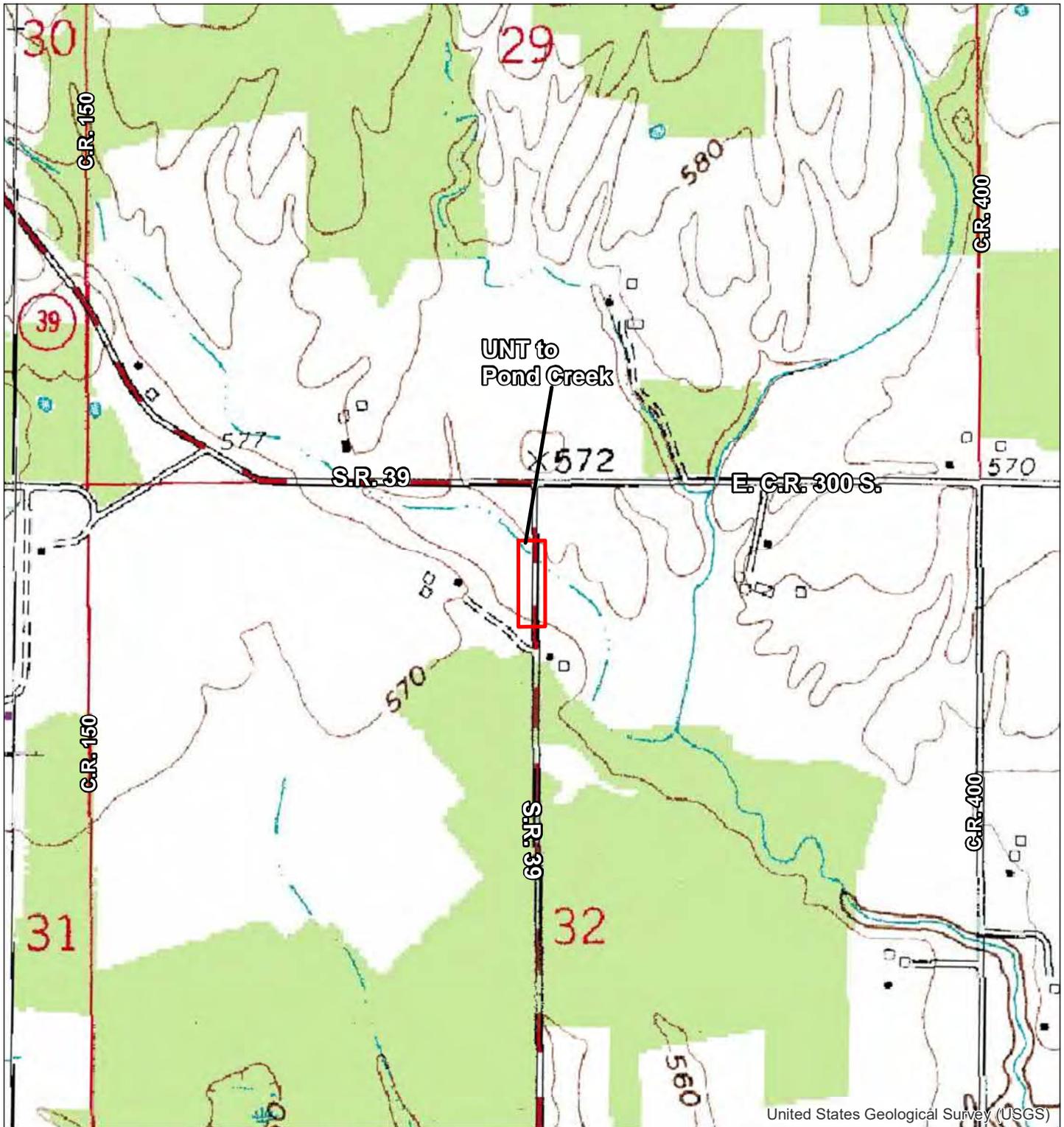
Project Study Limits (PSL) 12-Digit HUC Watershed

Exhibit 1 - Location Map
 S.R. 39 over UNT to Pond Creek
 Small Structure Replacement
 Washington Township, Jackson County, Indiana
 Des. No. 1602277
 Metric Project No. 18-0008-4
 Map Date: 3/05/19
 Map Author: Zachary Root

All locations approximate
 2018 Basemap
 Latitude: 38.83618 Longitude: -85.98922



Exh. 1

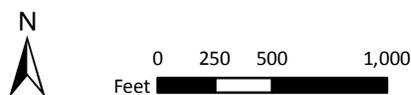


United States Geological Survey (USGS)

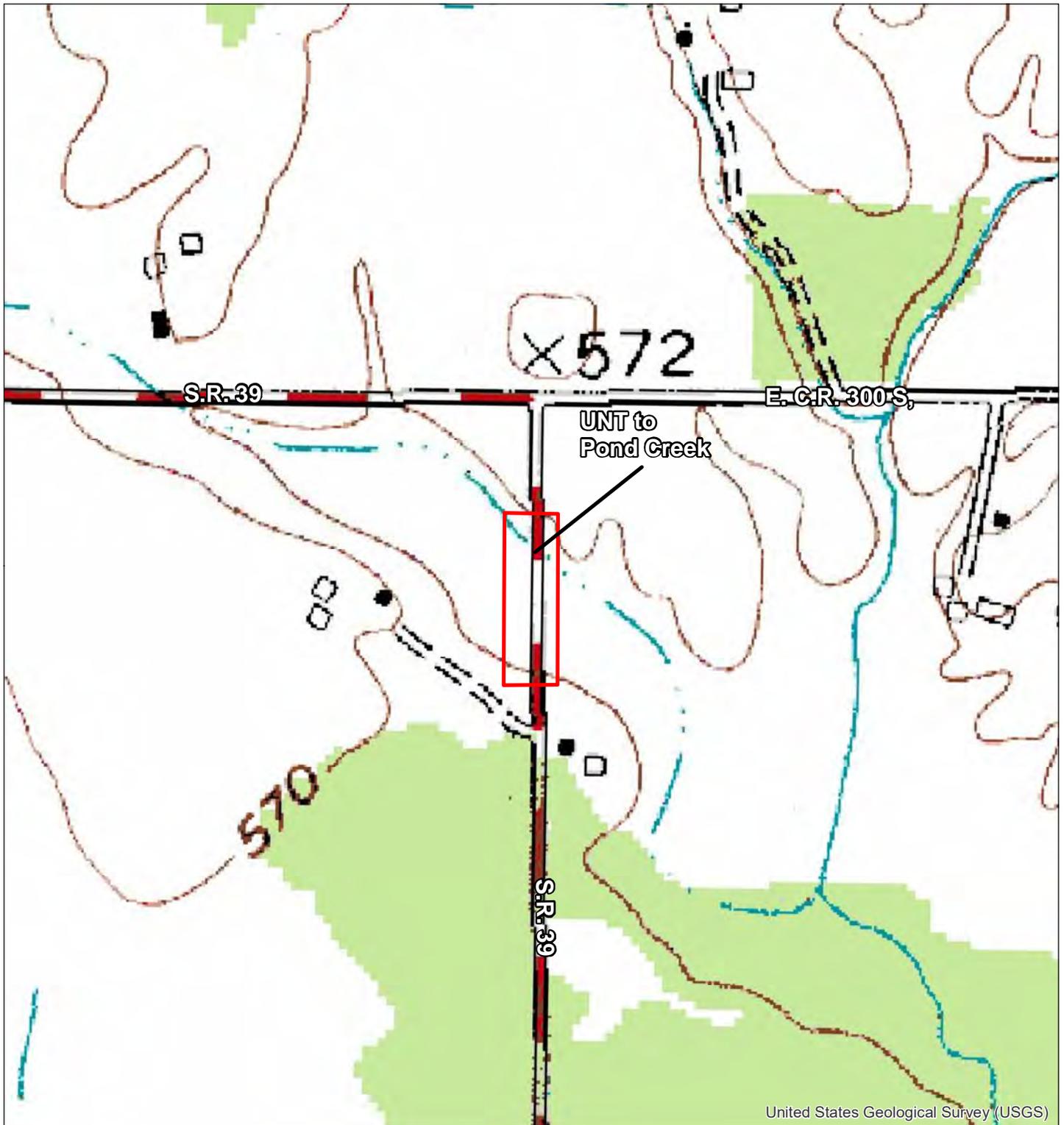
 Project Study Limits (PSL)

Exhibit 2A - USGS Topographic Map - Small Scale
 Tampico, IN 7.5 minute Quadrangle
 S.R. 39 over UNT to Pond Creek
 Small Structure Replacement
 Washington Township, Jackson County, Indiana
 Des. No. 1602277
 Metric Project No. 18-0008-4
 Map Date: 3/05/19
 Map Author: Zachary Root

All locations approximate
 Source: Indiana Spatial Data Portal (1996)



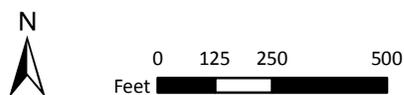
Exh. 2A



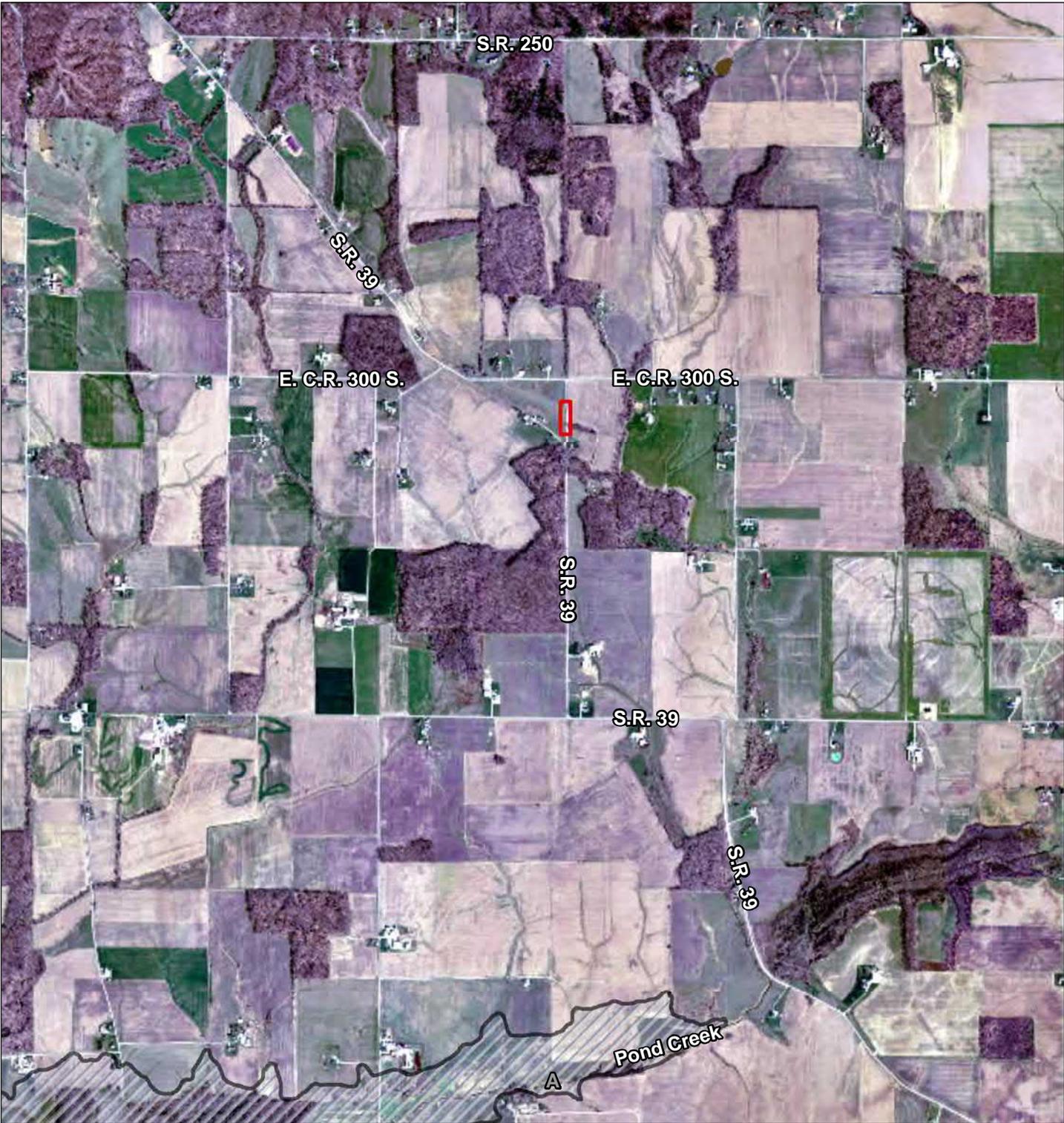
 Project Study Limits

Exhibit 2B - USGS Topographic Map - Large Scale
 Tampico, IN 7.5 minute Quadrangle
 S.R. 39 over UNT to Pond Creek
 Small Structure Replacement
 Washington Township, Jackson County, Indiana
 Des. No. 1602277
 Metric Project No. 18-0008-4
 Map Date: 3/05/19
 Map Author: Zachary Root

All locations approximate
 Source: Indiana Spatial Data Portal (1996)



Exh. 2B



Project Study Limits (PSL)
 Floodplains - Zone A - 1% Annual Chance

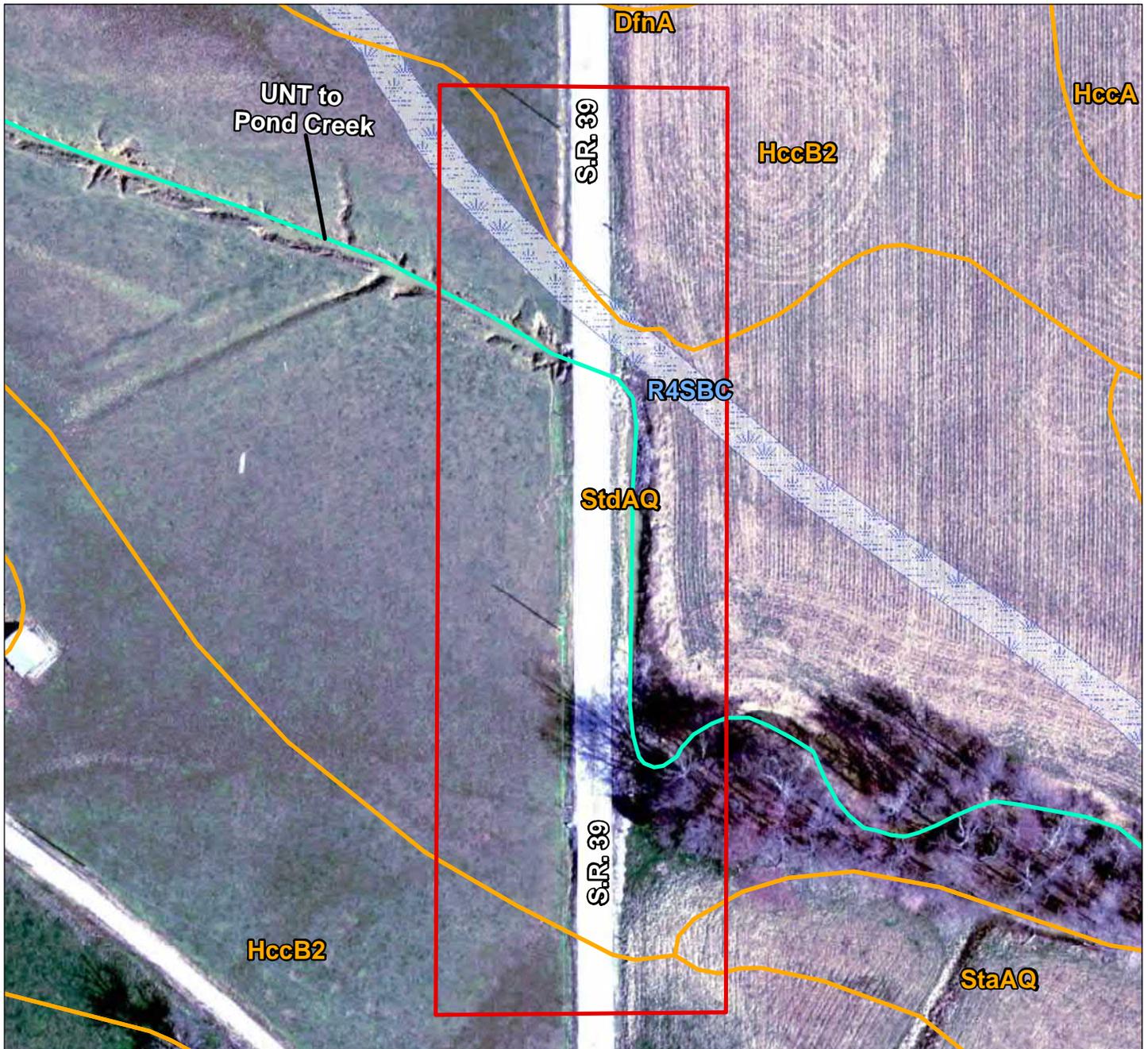
Exhibit 3 - Flood Insurance Rate Map (FIRM)
 S.R. 39 over UNT to Pond Creek
 Small Structure Replacement
 Washington Township, Jackson County, Indiana
 Des. No. 1602277
 Metric Project No. 18-0008-4
 Map Date: 3/05/19
 Map Author: Zachary Root

All locations approximate
 Source: Indiana Spatial Data Portal (2016)

N
 0 750 1,500 3,000
 Feet



Exh. 3



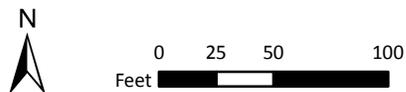
Symbol	Map Unit Name	Hydric Rating
HccB2	Haubstadt silt loam, 2 to 6 percent slopes, eroded	Not Hydric (0%)
StaAQ	Steff silt loam, 0 to 2 percent slopes, rarely flooded	Hydric (2%)
StdAQ	Stendal silt loam, 0 to 2 percent slopes, rarely flooded	Hydric (2%)

Indiana Spatial Data Portal, UITS, ESRI, Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

- Project Study Limits (PSL)
- NHD Flowline
- NWI Wetland
- NRCS Soil Survey

Exhibit 4 - NWI Wetland, NHD Flowline, and NRCS Soil Survey Map
 S.R. 39 over UNT to Pond Creek
 Small Structure Replacement
 Washington Township, Jackson County, Indiana
 Des. No. 1602277
 Metric Project No. 18-0008-4
 Map Date: 3/05/19
 Map Author: Zachary Root

All locations approximate
 Source: Indiana Spatial Data Portal (2016)



Exh. 3



- Project Study Limits (PSL)
- Stream Feature - Fringe Wetland
- Culvert
- Sampling Point (SP)
- Stream
- Culvert Opening

Exhibit 5 - Waters Delineation Map
 S.R. 39 over UNT to Pond Creek
 Small Structure Replacement
 Washington Township, Jackson County, Indiana
 Des. No. 1602277
 Metric Project No. 18-0008-4
 Map Date: 9/6/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (2016)

N

0 25 50 100
 Feet



Exh. 5



- Project Study Limits (PSL)
- Stream Feature - Fringe Wetland
- - - Culvert
- Sampling Point (SP)
- Stream
- Culvert Opening

Exhibit 6 - Photo Location Map
 S.R. 39 over UNT to Pond Creek
 Small Structure Replacement
 Washington Township, Jackson County, Indiana
 Des. No. 1602277
 Metric Project No. 18-0008-4
 Map Date: 9/6/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (2016)

N

0 25 50 100
 Feet



Exh. 6



1. View of SP-1, upland sampling point 1, soil profile.



2. View of SP-1, upland sampling point 1, Culvert 1, and UNT to Pond Creek, looking southeast (downstream).



3. View of SP-1, upland sampling point 1, and UNT to Pond Creek, looking northwest (upstream).



4. View of SP-2, upland sampling point 2, soil profile.

SITE PHOTOGRAPHS—8/1/2019

S.R. 39 over UNT to Pond Creek

Small Structure Replacement

Washington Township, Jackson County, Indiana

Des. No. 1602277





5. View of SP-2, upland sampling point 2, and UNT to Pond Creek, looking south (downstream).



6. View of SP-2, upland sampling point 2, and UNT to Pond Creek, looking north (upstream).



7. View of SP-3, upland sampling point 3, soil profile.



8. View of SP-3, upland sampling point 3, looking northwest.

SITE PHOTOGRAPHS—8/1/2019

S.R. 39 over UNT to Pond Creek
Small Structure Replacement
Washington Township, Jackson County, Indiana
Des. No. 1602277





9. View of SP-3, upland sampling point 3, looking southeast.



10. View of SP-4, stream feature within bank full width of UNT to Pond Creek, soil profile.



11. View of SP-4, fringe wetland within bank full width of UNT to Pond Creek, looking southeast (downstream). UNT to Pond Creek shown behind sampling point.



12. View of SP-4, fringe wetland within bank full width of UNT to Pond Creek, looking southwest (upstream). UNT to Pond Creek shown in behind sampling point.

SITE PHOTOGRAPHS—8/1/2019

S.R. 39 over UNT to Pond Creek
Small Structure Replacement
Washington Township, Jackson County, Indiana
Des. No. 1602277





13. View of UNT to Pond Creek from western project study limits (PSL), looking northwest (upstream).



14. View of UNT to Pond Creek from western PSL, looking southeast (downstream).



15. View of Culvert 1 inlet, looking northeast.



16. View of UNT to Pond Creek from Culvert 1 inlet, looking northwest (upstream).

SITE PHOTOGRAPHS—8/1/2019

S.R. 39 over UNT to Pond Creek
Small Structure Replacement
Washington Township, Jackson County, Indiana
Des. No. 1602277





17. View of Culvert 1 outlet, looking northwest.



18. View of UNT to Pond Creek from Culvert 1 outlet, looking south (downstream).



19. View of Culvert 2 outlet, looking southwest.



20. View of UNT to Pond Creek from Culvert 2 outlet, looking northeast (downstream).

SITE PHOTOGRAPHS—8/1/2019

S.R. 39 over UNT to Pond Creek

Small Structure Replacement

Washington Township, Jackson County, Indiana

Des. No. 1602277





21. View of Culvert 2 inlet, looking northwest.



22. View of UNT to Pond Creek from eastern PSL, looking southwest (upstream).



23. View of UNT to Pond Creek from eastern PSL, looking northeast (downstream).



24. View of S.R. 39 right-of-way (ROW) from northern PSL, looking south.

SITE PHOTOGRAPHS—8/1/2019

S.R. 39 over UNT to Pond Creek
Small Structure Replacement
Washington Township, Jackson County, Indiana
Des. No. 1602277





25. View of S.R. 39 ROW from northern PSL, looking south.



26. View of S.R. 39 ROW from southern PSL, looking northwest.



27. View of S.R. 39 ROW from southern PSL, looking north.

SITE PHOTOGRAPHS—8/1/2019

S.R. 39 over UNT to Pond Creek

Small Structure Replacement

Washington Township, Jackson County, Indiana

Des. No. 1602277



WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Des. No. 1602277 - S.R. 39 over UNT to Pond Creek City/County: Brownstown / Jackson County Sampling Date: 8/1/2019
 Applicant/Owner: INDOT State: IN Sampling Point: SP-1
 Investigator(s): Cory Shumate and Darin Gates Section, Township, Range: Section 32, Township 5 N, Range 5 E
 Landform (hillslope, terrace, etc.): Pasture Local relief (concave, convex, none): Convex
 Slope (%): 0% Lat: 38.836546 Long: -85.989385 Datum: NAD83
 Soil Map Unit Name: Stendal silt loam, 0 to 2 percent slopes, rarely flooded (StdAQ) - Hydric (2%) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u>	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes <u> </u>	No <u>x</u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>		Yes <u> </u>	No <u>x</u>
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>		Yes <u> </u>	No <u>x</u>
Remarks: Upland Sampling Point 1					

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status																									
Tree Stratum (Plot size: <u>30' radius</u>)																												
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)																								
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
_____ = Total Cover																												
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)																												
1. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;"></td> <td style="width:30%; text-align:center;"><u>Total % Cover of:</u></td> <td style="width:30%; text-align:center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species</td> <td style="text-align:center;"><u>5%</u></td> <td>x1 = <u>0.05</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align:center;"><u>15%</u></td> <td>x2 = <u>0.3</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align:center;"><u> </u></td> <td>x3 = <u> </u></td> </tr> <tr> <td>FACU species</td> <td style="text-align:center;"><u>70%</u></td> <td>x4 = <u>2.8</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align:center;"><u>20%</u></td> <td>x5 = <u>1</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:center;"><u>1.10</u> (A)</td> <td style="text-align:center;"><u>4.15</u> (B)</td> </tr> <tr> <td colspan="3" style="text-align:center;">Prevalence Index = B/A = <u>3.77</u></td> </tr> </table>		<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species	<u>5%</u>	x1 = <u>0.05</u>	FACW species	<u>15%</u>	x2 = <u>0.3</u>	FAC species	<u> </u>	x3 = <u> </u>	FACU species	<u>70%</u>	x4 = <u>2.8</u>	UPL species	<u>20%</u>	x5 = <u>1</u>	Column Totals:	<u>1.10</u> (A)	<u>4.15</u> (B)	Prevalence Index = B/A = <u>3.77</u>		
	<u>Total % Cover of:</u>	<u>Multiply by:</u>																										
OBL species	<u>5%</u>	x1 = <u>0.05</u>																										
FACW species	<u>15%</u>	x2 = <u>0.3</u>																										
FAC species	<u> </u>	x3 = <u> </u>																										
FACU species	<u>70%</u>	x4 = <u>2.8</u>																										
UPL species	<u>20%</u>	x5 = <u>1</u>																										
Column Totals:	<u>1.10</u> (A)	<u>4.15</u> (B)																										
Prevalence Index = B/A = <u>3.77</u>																												
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
_____ = Total Cover																												
Herb Stratum (Plot size: <u>5' radius</u>)																												
1. <u>Festuca rubra</u>	<u>60%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <u> </u> 1-Rapid Test for Hydrophytic Vegetation <u> </u> 2-Dominance Test is >50% <u> </u> 3-Prevalence Index is ≤3.0 ¹ <u> </u> 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																								
2. <u>Daucus carota</u>	<u>20%</u>	<u>No</u>	<u>UPL</u>																									
3. <u>Xanthorhiza simplicissima</u>	<u>10%</u>	<u>No</u>	<u>FACW</u>																									
4. <u>Solidago canadensis</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>																									
5. <u>Trifolium repens</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>																									
6. <u>Euthamia graminifolia</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>																									
7. <u>Persicaria hydropiper</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>																									
8. _____	_____	_____	_____																									
9. _____	_____	_____	_____																									
10. _____	_____	_____	_____																									
11. _____	_____	_____	_____																									
12. _____	_____	_____	_____																									
13. _____	_____	_____	_____																									
14. _____	_____	_____	_____																									
15. _____	_____	_____	_____																									
16. _____	_____	_____	_____																									
17. _____	_____	_____	_____																									
18. _____	_____	_____	_____																									
19. _____	_____	_____	_____																									
20. _____	_____	_____	_____																									
<u>110%</u> = Total Cover																												
Woody Vine Stratum (Plot size: <u>30' radius</u>)																												
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																								
2. _____	_____	_____	_____																									
_____ = Total Cover																												

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 7/2	90	10YR 6/4	10	C	M	SiL	Distinct redox concentrations
16-20	10YR 6/4	45	10YR 6/8	5	C	M	SiL	Mixed Matrix; Prominent redox concentrations
	10YR 5/6	45	10YR 3/4	5	C	M		Mixed matrix; Distinct redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes x No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Primary Indicators (minimum of one is required: check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

<p>Field Observations:</p> <p>Surface Water Present? Yes <u> </u> No <u> x </u> Depth (inches): _____</p> <p>Water Table Present? Yes <u> </u> No <u> x </u> Depth (inches): _____</p> <p>Saturation Present? Yes <u> </u> No <u> x </u> Depth (inches): _____</p> <p>(includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes <u> </u> No <u> x </u></p>
---	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Des. No. 1602277 - S.R. 39 over UNT to Pond Creek City/County: Brownstown / Jackson County Sampling Date: 8/1/2019
 Applicant/Owner: INDOT State: IN Sampling Point: SP-2
 Investigator(s): Cory Shumate and Darin Gates Section, Township, Range: Section 32, Township 5 N, Range 5 E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 3% Lat: 38.83606 Long: -85.98915 Datum: NAD83
 Soil Map Unit Name: Stendal silt loam, 0 to 2 percent slopes, rarely flooded - Hydric (2%) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u>	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes <u> </u>	No <u>x</u>
Hydric Soil Present?	Yes <u> </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>			
Remarks: Upland Sampling Point 2					

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status																									
Tree Stratum (Plot size: <u>30' radius</u>)																												
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)																								
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
_____ = Total Cover																												
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)																												
1. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;"></td> <td style="width:30%; text-align: center;">Total % Cover of:</td> <td style="width:30%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td style="text-align: center;"><u>30%</u></td> <td style="text-align: center;">x1 = <u>0.3</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">x2 = _____</td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>10%</u></td> <td style="text-align: center;">x3 = <u>0.3</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>65%</u></td> <td style="text-align: center;">x4 = <u>2.6</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">x5 = _____</td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;"><u>1.05</u> (A)</td> <td style="text-align: center;"><u>3.2</u> (B)</td> </tr> <tr> <td colspan="3" style="text-align: center;">Prevalence Index = B/A = <u>3.05</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species	<u>30%</u>	x1 = <u>0.3</u>	FACW species	_____	x2 = _____	FAC species	<u>10%</u>	x3 = <u>0.3</u>	FACU species	<u>65%</u>	x4 = <u>2.6</u>	UPL species	_____	x5 = _____	Column Totals:	<u>1.05</u> (A)	<u>3.2</u> (B)	Prevalence Index = B/A = <u>3.05</u>		
	Total % Cover of:	Multiply by:																										
OBL species	<u>30%</u>	x1 = <u>0.3</u>																										
FACW species	_____	x2 = _____																										
FAC species	<u>10%</u>	x3 = <u>0.3</u>																										
FACU species	<u>65%</u>	x4 = <u>2.6</u>																										
UPL species	_____	x5 = _____																										
Column Totals:	<u>1.05</u> (A)	<u>3.2</u> (B)																										
Prevalence Index = B/A = <u>3.05</u>																												
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
_____ = Total Cover																												
Herb Stratum (Plot size: <u>5' radius</u>)																												
1. <u>Festuca rubra</u>	<u>65%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation _____ 2-Dominance Test is >50% _____ 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																								
2. <u>Leersia oryzoides</u>	<u>30%</u>	<u>Yes</u>	<u>OBL</u>																									
3. <u>Toxicodendron radicans</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>																									
4. <u>Ambrosia trifida</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
8. _____	_____	_____	_____																									
9. _____	_____	_____	_____																									
10. _____	_____	_____	_____																									
11. _____	_____	_____	_____																									
12. _____	_____	_____	_____																									
13. _____	_____	_____	_____																									
14. _____	_____	_____	_____																									
15. _____	_____	_____	_____																									
16. _____	_____	_____	_____																									
17. _____	_____	_____	_____																									
18. _____	_____	_____	_____																									
19. _____	_____	_____	_____																									
20. _____	_____	_____	_____																									
_____ = Total Cover																												
Woody Vine Stratum (Plot size: <u>30' radius</u>)																												
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																								
2. _____	_____	_____	_____																									
_____ = Total Cover																												

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 7/4	50	10YR 6/8	5	C	M	SiL	Mixed Matrix; Prominent redox concentrations
	10YR 6/3	45						Mixed Matrix
10-20	10YR 6/3	90	10 YR 5/8	10	C	M	SiL	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required: check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____	Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Des. No. 1602277 - S.R. 39 over UNT to Pond Creek City/County: Brownstown / Jackson County Sampling Date: 8/1/2019
 Applicant/Owner: INDOT State: IN Sampling Point: SP-3.
 Investigator(s): Cory Shumate and Darin Gates Section, Township, Range: Section 32, Township 5 N, Range 5 E
 Landform (hillslope, terrace, etc.): Top of Hillslope Local relief (concave, convex, none): Convex
 Slope (%): 0% Lat: 38.836005 Long: -85.989078 Datum: NAD83
 Soil Map Unit Name: Stendal silt loam, 0 to 2 percent slopes, rarely flooded (StdAQ) - Hydric (2%) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u>	No <u>X</u>	Is the Sampled Area within a Wetland?		
Hydric Soil Present?	Yes <u> </u>	No <u>X</u>		Yes <u> </u>	No <u>x</u>
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>			
Remarks: Upland Sampling Point 3.					

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status																									
Tree Stratum (Plot size: <u>30' radius</u>)																												
1. <u>Ulmus americana</u>	<u>10%</u>	<u>Yes</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>43%</u> (A/B)																								
2. <u>Juglans nigra</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>																									
3. _____																												
4. _____																												
5. _____																												
	= Total Cover																											
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)																												
1. <u>Juglans nigra</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;"></td> <td style="width:25%; text-align: center;">Total % Cover of:</td> <td style="width:25%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td align="center"><u> </u></td> <td align="center">x1 = <u> </u></td> </tr> <tr> <td>FACW species</td> <td align="center"><u>30%</u></td> <td align="center">x2 = <u>0.6</u></td> </tr> <tr> <td>FAC species</td> <td align="center"><u>25%</u></td> <td align="center">x3 = <u>0.75</u></td> </tr> <tr> <td>FACU species</td> <td align="center"><u>55%</u></td> <td align="center">x4 = <u>2.2</u></td> </tr> <tr> <td>UPL species</td> <td align="center"><u>20%</u></td> <td align="center">x5 = <u>1</u></td> </tr> <tr> <td>Column Totals:</td> <td align="center"><u>1.30</u> (A)</td> <td align="center"><u>4.55</u> (B)</td> </tr> <tr> <td colspan="3">Prevalence Index = B/A = <u>3.50</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species	<u> </u>	x1 = <u> </u>	FACW species	<u>30%</u>	x2 = <u>0.6</u>	FAC species	<u>25%</u>	x3 = <u>0.75</u>	FACU species	<u>55%</u>	x4 = <u>2.2</u>	UPL species	<u>20%</u>	x5 = <u>1</u>	Column Totals:	<u>1.30</u> (A)	<u>4.55</u> (B)	Prevalence Index = B/A = <u>3.50</u>		
	Total % Cover of:	Multiply by:																										
OBL species	<u> </u>	x1 = <u> </u>																										
FACW species	<u>30%</u>	x2 = <u>0.6</u>																										
FAC species	<u>25%</u>	x3 = <u>0.75</u>																										
FACU species	<u>55%</u>	x4 = <u>2.2</u>																										
UPL species	<u>20%</u>	x5 = <u>1</u>																										
Column Totals:	<u>1.30</u> (A)	<u>4.55</u> (B)																										
Prevalence Index = B/A = <u>3.50</u>																												
2. _____																												
3. _____																												
4. _____																												
5. _____																												
	= Total Cover																											
Herb Stratum (Plot size: <u>5' radius</u>)																												
1. <u>Echinocystis lobata</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u> </u> 1-Rapid Test for Hydrophytic Vegetation <u> </u> 2-Dominance Test is >50% <u> </u> 3-Prevalence Index is ≤3.0 ¹ <u> </u> 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																								
2. <u>Daucus carota</u>	<u>20%</u>	<u>Yes</u>	<u>UPL</u>																									
3. <u>Calystegia sepium</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>																									
4. <u>Setaria faberi</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>																									
5. <u>Solidago canadensis</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>																									
6. <u>Ambrosia trifida</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>																									
7. <u>Hypericum perforatum</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>																									
8. _____																												
9. _____																												
10. _____																												
11. _____																												
12. _____																												
13. _____																												
14. _____																												
15. _____																												
16. _____																												
17. _____																												
18. _____																												
19. _____																												
20. _____																												
	100% = Total Cover																											
Woody Vine Stratum (Plot size: <u>30' radius</u>)																												
1. _____				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																								
2. _____																												
	= Total Cover																											

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20	10YR 5/4	80	10YR 6/6	10	C	M	SiL	Distinct redox concentrations
			10YR 6/3	10	C	M		Faint redox concentrations.

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required: check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)

Field Observations:		Wetland Hydrology Present? Yes _____ No <u>X</u>
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u>	Depth (inches): _____	

(includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Des. No. 1602277 - S.R. 39 over UNT to Pond Creek City/County: Brownstown / Jackson County Sampling Date: 8/1/2019
 Applicant/Owner: INDOT State: IN Sampling Point: SP-4
 Investigator(s): Cory Shumate and Darin Gates Section, Township, Range: Section 32, Township 5 N, Range 5 E
 Landform (hillslope, terrace, etc.): Streambank Local relief (concave, convex, none): Concave
 Slope (%): 1% Lat: 38.835873 Long: -85.989084 Datum: NAD83
 Soil Map Unit Name: Stendal silt loam, 0 to 2 percent slopes, rarely flooded (StdAQ) - Hydric (2%) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>x</u>	No <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>			

Remarks:
 Sampling point was taken within fringe wetland of Unnamed Tributary to Pond Creek. Specifically, it was above the Ordinary High Water Mark but below the bankfull width.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)																																
1. <u>Ulmus americana</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>																																	
2. _____	_____	_____	_____																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
_____ = Total Cover																																				
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: <table border="0"> <tr> <td colspan="2">Total % Cover of:</td> <td colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td><u>35%</u></td> <td>x1 =</td> <td><u>0.35</u></td> </tr> <tr> <td>FACW species</td> <td><u>60%</u></td> <td>x2 =</td> <td><u>1.2</u></td> </tr> <tr> <td>FAC species</td> <td>_____</td> <td>x3 =</td> <td>_____</td> </tr> <tr> <td>FACU species</td> <td><u>20%</u></td> <td>x4 =</td> <td><u>0.8</u></td> </tr> <tr> <td>UPL species</td> <td>_____</td> <td>x5 =</td> <td>_____</td> </tr> <tr> <td>Column Totals:</td> <td><u>1.15</u> (A)</td> <td></td> <td><u>2.35</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: center;">Prevalence Index = B/A = <u>2.04</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	<u>35%</u>	x1 =	<u>0.35</u>	FACW species	<u>60%</u>	x2 =	<u>1.2</u>	FAC species	_____	x3 =	_____	FACU species	<u>20%</u>	x4 =	<u>0.8</u>	UPL species	_____	x5 =	_____	Column Totals:	<u>1.15</u> (A)		<u>2.35</u> (B)	Prevalence Index = B/A = <u>2.04</u>			
Total % Cover of:		Multiply by:																																		
OBL species	<u>35%</u>	x1 =	<u>0.35</u>																																	
FACW species	<u>60%</u>	x2 =	<u>1.2</u>																																	
FAC species	_____	x3 =	_____																																	
FACU species	<u>20%</u>	x4 =	<u>0.8</u>																																	
UPL species	_____	x5 =	_____																																	
Column Totals:	<u>1.15</u> (A)		<u>2.35</u> (B)																																	
Prevalence Index = B/A = <u>2.04</u>																																				
1. <u>Juglans nigra</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>																																	
2. _____	_____	_____	_____																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
_____ = Total Cover																																				
Herb Stratum (Plot size: <u>5' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: _____ 1-Rapid Test for Hydrophytic Vegetation <u>X</u> 2-Dominance Test is >50% <u>X</u> 3-Prevalence Index is ≤3.0 ¹ _____ 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																
1. <u>Solidago gigantea</u>	<u>25%</u>	<u>Yes</u>	<u>FACW</u>																																	
2. <u>Persicaria hydropiper</u>	<u>25%</u>	<u>Yes</u>	<u>OBL</u>																																	
3. <u>Helianthus tuberosus</u>	<u>15%</u>	<u>No</u>	<u>FACU</u>																																	
4. <u>Euthamia graminifolia</u>	<u>10%</u>	<u>No</u>	<u>FACW</u>																																	
5. <u>Leersia oryzoides</u>	<u>10%</u>	<u>No</u>	<u>OBL</u>																																	
6. <u>Ipomoea lacunosa</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>																																	
7. _____	_____	_____	_____																																	
8. _____	_____	_____	_____																																	
9. _____	_____	_____	_____																																	
10. _____	_____	_____	_____																																	
11. _____	_____	_____	_____																																	
12. _____	_____	_____	_____																																	
13. _____	_____	_____	_____																																	
14. _____	_____	_____	_____																																	
15. _____	_____	_____	_____																																	
16. _____	_____	_____	_____																																	
17. _____	_____	_____	_____																																	
18. _____	_____	_____	_____																																	
19. _____	_____	_____	_____																																	
20. _____	_____	_____	_____																																	
_____ = Total Cover																																				
Woody Vine Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																																
1. _____	_____	_____	_____																																	
2. _____	_____	_____	_____																																	
_____ = Total Cover																																				

Remarks: (Include photo numbers here or on a separate sheet.)
 Bare ground and riprap present.

SOIL

Sampling Point: SP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 4/1	90	10YR 2/1	10	C	M	SL	Faint redox concentrations; Gravel Present
2-11	N 7/	65	7.5YR 5/6	35	C	M	SiL	Prominent redox concentrations
11-15	N 6/	85	10YR 5/6	15	C	M	SiL	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 15

Hydric Soil Present? Yes x No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required: check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	

Field Observations:		Wetland Hydrology Present? Yes <u>x</u> No <u> </u>
Surface Water Present? Yes <u> </u> No <u>X</u>	Depth (inches): <u> </u>	
Water Table Present? Yes <u>X</u> No <u> </u>	Depth (inches): <u>13.5</u>	
Saturation Present? Yes <u>X</u> No <u> </u> (includes capillary fringe)	Depth (inches): <u>5</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Sampling point was located on a streambank with concave local relief. Therefore, it meets the criteria for geomorphic position (D2).

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: November 7, 2019

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:

Cory Shumate
Metric Environmental, LLC
6971 Hillsdale Court
Indianapolis, IN 46250
317-350-4896
corys@metricenv.com

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

The proposed project (Des. No. 1602277) includes replacing the small structure, S.R. 39 over UNT to Pond Creek in Washington Township, Jackson County, Indiana. Specifically, the project is located in Section 32, Township 5 North, Range 5 East. The project study limits extend approximately 510 feet along S.R. 39 and approximately 80 feet from S.R. 39 centerline.

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: IN County/parish/borough: Jackson County City: Brownstown
Center coordinates of site (lat/long in degree decimal format):
Lat.: 38.83618°
Long.: -85.98922 °
Universal Transverse Mercator: 16 N 4299240.94 E 601010.69
Name of nearest waterbody: Pond Creek

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date:

Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH “MAY BE” SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource “may be” subject (i.e., Section 404 or Section 10/404)
UNT to Pond Creek	38.836241	-85.989123	382.9 LFT (0.053 ac)	Non-wetland Waters	Section 404

- 1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
- 2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there "*may be*" waters of the U.S. and/or that there "*may be*" navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
 - Map: _____ Dated 3/05/2019 & 9/6/2019
 - Data sheets prepared/submitted by or on behalf of the PJD requestor.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report. Rationale: _____
- Data sheets prepared by the Corps: _____
- Corps navigable waters' study: _____
- U.S. Geological Survey Hydrologic Atlas: _____
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: Tampico, IN 7.5-min, 1996

- Natural Resources Conservation Service Soil Survey. Citation: SSURGO Jackson County

- National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/
- State/local wetland inventory map(s): _____
- FEMA/FIRM maps: ; Effective _____

- 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Indiana Aerial Photograph, 2016
or Other (Name & Date): Site Photographs, 8/1/2019
- Previous determination(s). File no. and date of response letter: _____
- Other information (please specify): _____

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of
Regulatory staff member
completing PJD



Signature and date of
person requesting PJD
(REQUIRED, unless obtaining
the signature is impracticable)¹
11/7/19

¹ Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.



Strand Associates, Inc.®

629 Washington Street

Columbus, IN 47201

(P) 812-372-9911

NOTICE OF SURVEY

June 26, 2018

Mr. Bernard G . & Barbara J. Steinkamp
2043 E CR 300 S
Brownstown, IN 47220

Re: Location Control Route Survey for Indiana Department of Transportation
S.R. 39 over Unnamed Tributary Pond Creek
Jackson County, Indiana
Des. No. 1602277

Dear Property Owner:

Our information indicates that property is occupied and/or owned by you near this proposed bridge replacement project. Our employees will conduct a survey of the project area in the near future. It may be necessary for them to come onto your property to complete this work. This is allowed by law as stated in Indiana Code IC 8-23-7-26. They will show you their identification, if you are available, before coming onto your property. If you have sold this property, or it is occupied by someone else, please provide any known name and/or address changes of the new owner or current occupant so that we may contact them about the survey.

The survey work will include mapping the location of features such as trees, buildings, fences, driveways, sidewalks, and utilities. The survey is needed for proper planning and design of this bridge replacement project. Please be assured of our sincere desire to cause you as little inconvenience as possible during this survey.

At this stage we generally do not know what affect, if any, this project may eventually have on your property. If it is determined at a later time that your property will be affected, you will be contacted at that time with additional information. If any problems occur, please contact our field crew or myself at (812) 372-9911 or write to the address provided above. Thank you for your cooperation.

Sincerely,

STRAND ASSOCIATES, INC.®



Jacob E. Fitzsimmons, P.L.S.

JEF:vis\S:\COL\4000--4099\4060\312\Survey\Letters\SR 39 UNT Pond Cr NOTICE OF SURVEY.docx

Notice of Entry Letter Mailing List

Name	Address	City	State	ZIP Code
Stanely Steinkamp	3137 S State Rd 39	Brownstown	IN	47220
Bernard G . & Barbara J. Steinkamp	2043 E Co Rd 300 S	Brownstown	IN	47220

Indiana Department of Transportation (INDOT)
 State Preservation and Local Initiated Projects FY 2018 - 2021

SPONSOR	CONTR ACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2018	2019	2020	2021
39889 / 1600702	Init.	SR 135	Box Culvert Replacement	4.79 miles N of Junction SR-135/US-50	Seymour	0	STP			Bridge Construction	PE	\$20,000.00	\$5,000.00				\$25,000.00
										Bridge ROW	RW	\$24,000.00	\$6,000.00			\$30,000.00	
										Bridge Consulting	PE	\$120,000.00	\$30,000.00	\$100,000.00			\$50,000.00
39893 / 1600488	Init.	SR 39	Replace Superstructure	3.89 miles S SR-250, over Pond Creek	Seymour	0	STP			Bridge ROW	RW	\$28,000.00	\$7,000.00			\$35,000.00	
										Bridge Consulting	PE	\$148,000.00	\$37,000.00	\$105,000.00			\$80,000.00
										Bridge Construction	PE	\$56,000.00	\$14,000.00				\$70,000.00
										Bridge Construction	CN	\$657,218.40	\$164,304.60				\$821,523.00
40056 / 1602078	Init.	SR 258	Bridge Painting	2.50 miles W of SR 11 over East Fork White River	Seymour	0	STP			Bridge Consulting	PE	\$60,000.00	\$15,000.00	\$75,000.00			
										Bridge Construction	CN	\$428,000.00	\$107,000.00			\$535,000.00	
										Construction	PE	\$4,000.00	\$1,000.00		\$5,000.00		
40090 / 1600664	Init.	US 31	Small Structure Maint and Repair	6.75 miles N of US 50	Seymour	0	STP			Bridge Construction	CN	\$395,044.80	\$98,761.20				\$493,806.00
										Bridge Construction	PE	\$8,000.00	\$2,000.00				\$10,000.00
										Bridge Consulting	PE	\$40,000.00	\$10,000.00				\$50,000.00
										Bridge ROW	RW	\$28,000.00	\$7,000.00			\$35,000.00	
40199 / 1601986	Init.	US 31	Bridge Painting	1.06 mile N of I-65 over Mutton Creek Ditch	Seymour	0	STP			Bridge Construction	PE	\$4,000.00	\$1,000.00		\$5,000.00		
										Bridge Construction	CN	\$380,000.00	\$95,000.00			\$475,000.00	
										Bridge Consulting	PE	\$44,000.00	\$11,000.00	\$10,000.00		\$45,000.00	
40260 / 1298336	Init.	SR 235	Small Structure Replacement	1.65 miles W of SR 135	Seymour	0	STP			Bridge Construction	CN	\$336,024.80	\$84,006.20		\$420,031.00		

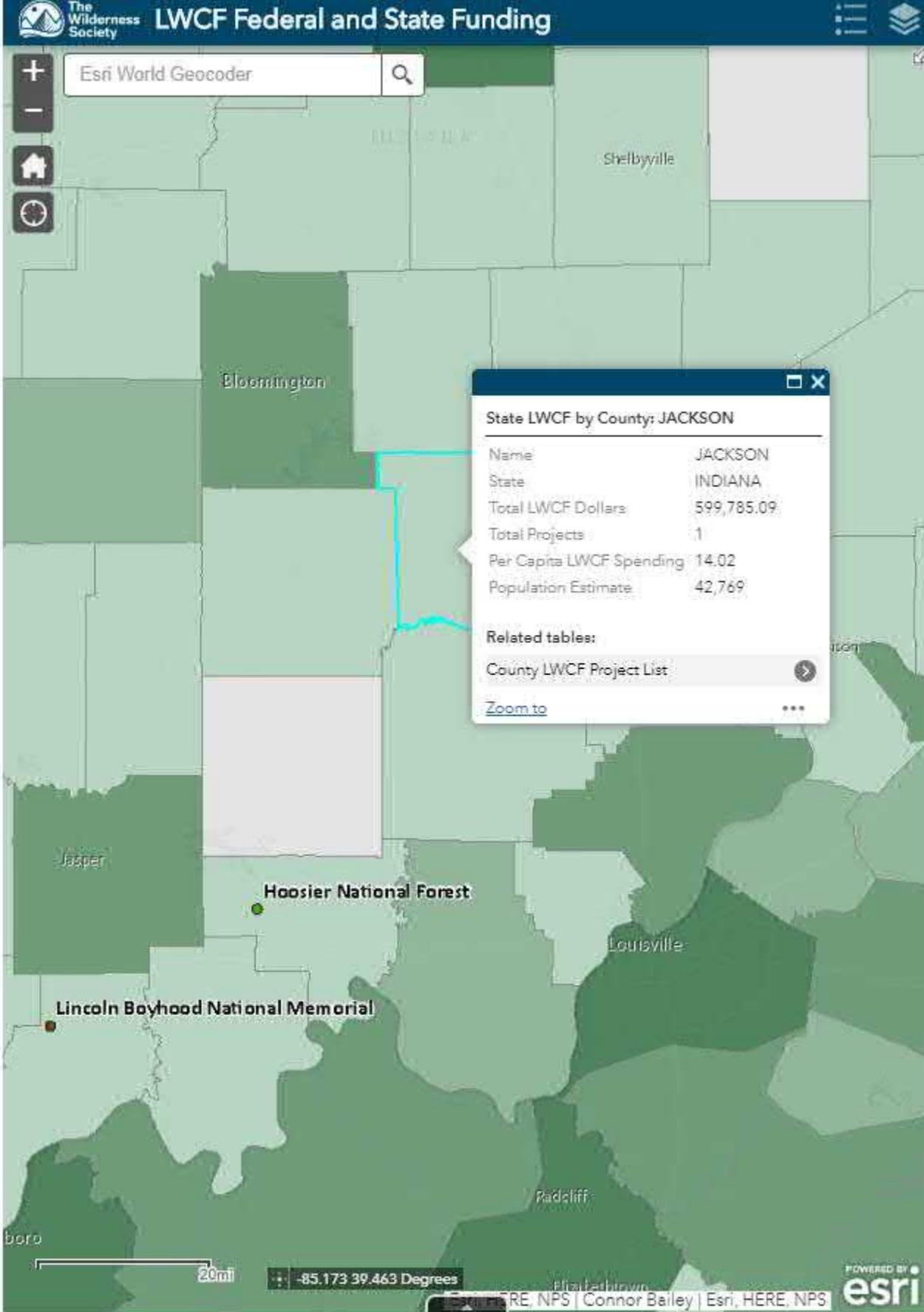
Des. 1602277 falls under lead Des. 1600488. Project costs associated with Des. 1602277 can be found on Page 6 of this document.

*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.

**APPENDIX I
ADDITIONAL STUDIES**



Esri World Geocoder

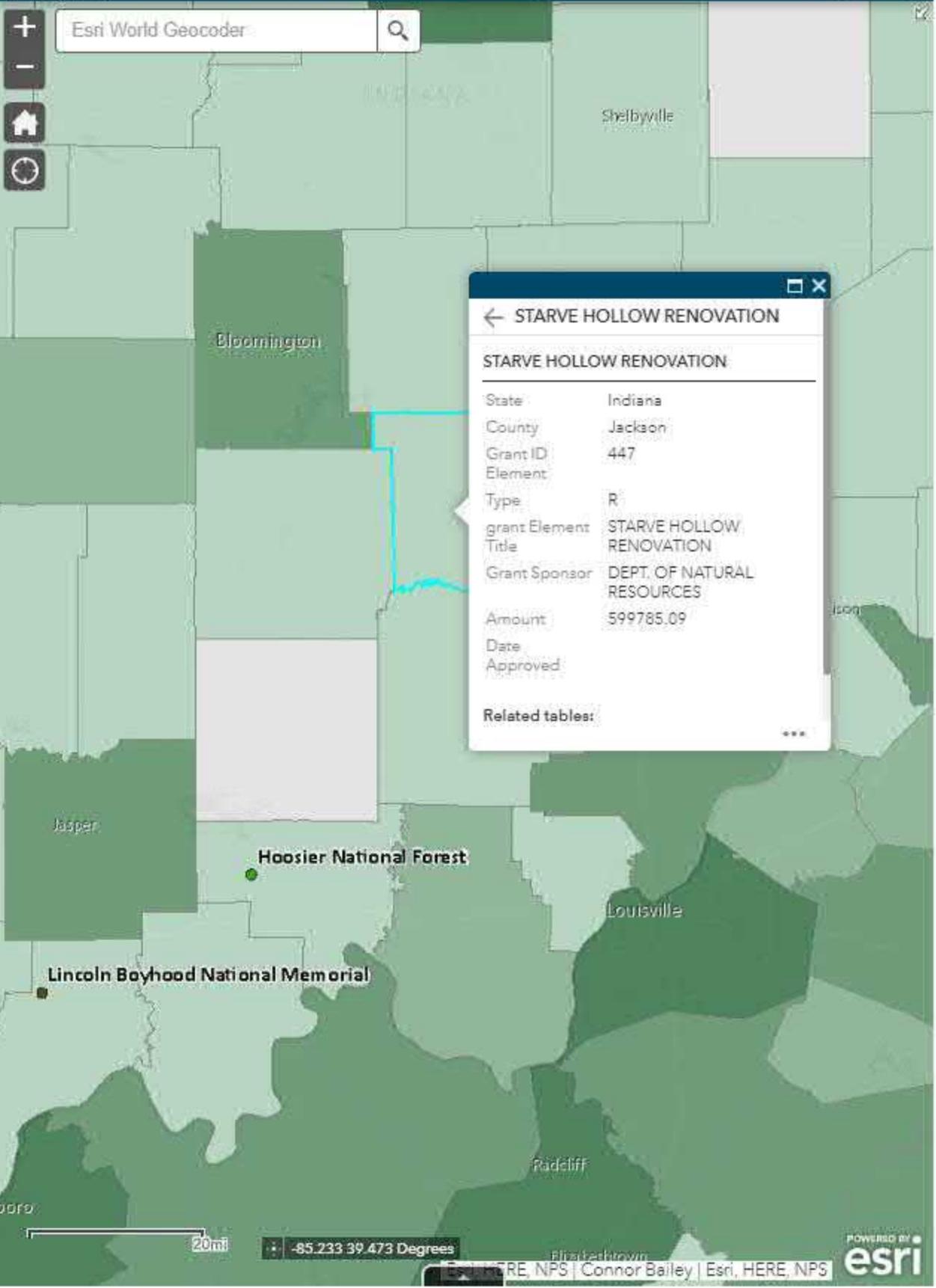


20mi

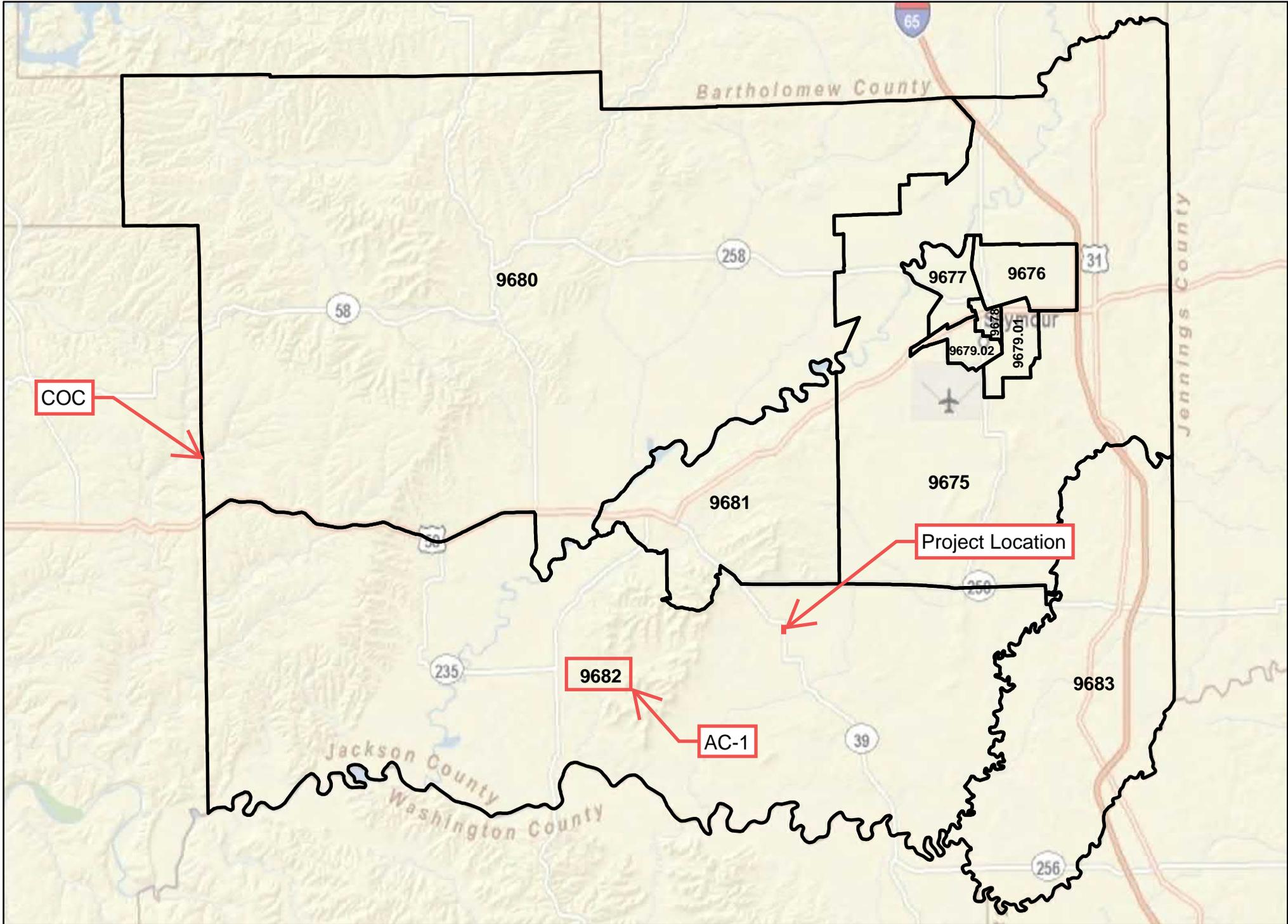
-85.173 39.463 Degrees

RE, NPS | Connor Bailey | Esri, HERE, NPS





Jackson County, Indiana Census Tracts 2010





S1701

POVERTY STATUS IN THE PAST 12 MONTHS

2013-2017 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Subject	Jackson County, Indiana					
	Total		Below poverty level		Percent below poverty level	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Population for whom poverty status is determined	42,740	+/-207	6,650	+/-842	15.6%	+/-2.0
AGE						
Under 18 years	10,340	+/-167	2,002	+/-401	19.4%	+/-3.9
Under 5 years	2,791	+/-114	622	+/-167	22.3%	+/-6.2
5 to 17 years	7,549	+/-175	1,380	+/-327	18.3%	+/-4.3
Related children of householder under 18 years	10,291	+/-175	1,953	+/-396	19.0%	+/-3.8
18 to 64 years	25,929	+/-142	3,841	+/-531	14.8%	+/-2.1
18 to 34 years	8,693	+/-177	1,682	+/-327	19.3%	+/-3.8
35 to 64 years	17,236	+/-207	2,159	+/-356	12.5%	+/-2.1
60 years and over	9,026	+/-306	1,041	+/-225	11.5%	+/-2.5
65 years and over	6,471	+/-171	807	+/-205	12.5%	+/-3.1
SEX						
Male	21,355	+/-187	2,754	+/-399	12.9%	+/-1.9
Female	21,385	+/-235	3,896	+/-568	18.2%	+/-2.7
RACE AND HISPANIC OR LATINO ORIGIN						
White alone	39,319	+/-334	5,894	+/-771	15.0%	+/-2.0
Black or African American alone	438	+/-103	104	+/-130	23.7%	+/-26.2

Subject	Jackson County, Indiana					
	Total		Below poverty level		Percent below poverty level	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
American Indian and Alaska Native alone	155	+/-61	74	+/-87	47.7%	+/-43.5
Asian alone	812	+/-89	198	+/-248	24.4%	+/-30.0
Native Hawaiian and Other Pacific Islander alone	0	+/-24	0	+/-24	-	**
Some other race alone	1,553	+/-253	327	+/-257	21.1%	+/-15.8
Two or more races	463	+/-157	53	+/-52	11.4%	+/-10.1
Hispanic or Latino origin (of any race)	2,784	+/-18	781	+/-300	28.1%	+/-10.8
White alone, not Hispanic or Latino	38,155	+/-210	5,471	+/-775	14.3%	+/-2.0
EDUCATIONAL ATTAINMENT						
Population 25 years and over	29,001	+/-166	3,865	+/-505	13.3%	+/-1.8
Less than high school graduate	3,701	+/-442	1,447	+/-350	39.1%	+/-7.1
High school graduate (includes equivalency)	12,697	+/-580	1,623	+/-283	12.8%	+/-2.2
Some college, associate's degree	7,943	+/-431	684	+/-192	8.6%	+/-2.4
Bachelor's degree or higher	4,660	+/-420	111	+/-79	2.4%	+/-1.7
EMPLOYMENT STATUS						
Civilian labor force 16 years and over	21,446	+/-577	1,980	+/-366	9.2%	+/-1.7
Employed	20,125	+/-575	1,483	+/-344	7.4%	+/-1.7
Male	10,972	+/-332	670	+/-202	6.1%	+/-1.8
Female	9,153	+/-425	813	+/-218	8.9%	+/-2.3
Unemployed	1,321	+/-230	497	+/-154	37.6%	+/-9.3
Male	773	+/-163	234	+/-99	30.3%	+/-10.9
Female	548	+/-127	263	+/-93	48.0%	+/-12.7
WORK EXPERIENCE						
Population 16 years and over	33,592	+/-207	4,813	+/-612	14.3%	+/-1.8
Worked full-time, year-round in the past 12 months	14,698	+/-542	673	+/-222	4.6%	+/-1.5
Worked part-time or part-year in the past 12 months	7,443	+/-508	1,260	+/-241	16.9%	+/-3.0
Did not work	11,451	+/-521	2,880	+/-434	25.2%	+/-3.4
ALL INDIVIDUALS WITH INCOME BELOW THE FOLLOWING POVERTY RATIOS						
50 percent of poverty level	2,670	+/-544	(X)	(X)	(X)	(X)
125 percent of poverty level	8,420	+/-842	(X)	(X)	(X)	(X)
150 percent of poverty level	10,879	+/-1,008	(X)	(X)	(X)	(X)
185 percent of poverty level	13,318	+/-1,006	(X)	(X)	(X)	(X)
200 percent of poverty level	15,233	+/-1,034	(X)	(X)	(X)	(X)
300 percent of poverty level	24,178	+/-1,085	(X)	(X)	(X)	(X)
400 percent of poverty level	30,793	+/-1,038	(X)	(X)	(X)	(X)
500 percent of poverty level	36,158	+/-769	(X)	(X)	(X)	(X)
UNRELATED INDIVIDUALS FOR WHOM POVERTY STATUS IS DETERMINED	7,009	+/-667	2,153	+/-353	30.7%	+/-3.4

Subject	Jackson County, Indiana					
	Total		Below poverty level		Percent below poverty level	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Male	3,208	+/-348	783	+/-183	24.4%	+/-5.0
Female	3,801	+/-432	1,370	+/-275	36.0%	+/-5.3
15 years	16	+/-22	16	+/-22	100.0%	+/-71.2
16 to 17 years	33	+/-27	33	+/-27	100.0%	+/-49.6
18 to 24 years	851	+/-217	474	+/-167	55.7%	+/-12.1
25 to 34 years	982	+/-202	329	+/-136	33.5%	+/-10.7
35 to 44 years	1,044	+/-212	335	+/-115	32.1%	+/-8.9
45 to 54 years	828	+/-217	214	+/-94	25.8%	+/-8.7
55 to 64 years	1,243	+/-219	375	+/-122	30.2%	+/-8.0
65 to 74 years	859	+/-168	147	+/-62	17.1%	+/-6.5
75 years and over	1,153	+/-162	230	+/-91	19.9%	+/-7.3
Mean income deficit for unrelated individuals (dollars)	6,132	+/-638	(X)	(X)	(X)	(X)
Worked full-time, year-round in the past 12 months	2,655	+/-440	338	+/-158	12.7%	+/-5.0
Worked less than full-time, year-round in the past 12 months	1,497	+/-263	664	+/-159	44.4%	+/-8.8
Did not work	2,857	+/-343	1,151	+/-211	40.3%	+/-5.0

Subject	Census Tract 9682, Jackson County, Indiana					
	Total		Below poverty level		Percent below poverty level	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Population for whom poverty status is determined	4,022	+/-357	482	+/-171	12.0%	+/-4.0
AGE						
Under 18 years	931	+/-157	172	+/-91	18.5%	+/-9.0
Under 5 years	145	+/-56	43	+/-40	29.7%	+/-21.7
5 to 17 years	786	+/-136	129	+/-76	16.4%	+/-9.2
Related children of householder under 18 years	922	+/-157	163	+/-88	17.7%	+/-8.9
18 to 64 years	2,388	+/-237	275	+/-96	11.5%	+/-4.0
18 to 34 years	737	+/-151	136	+/-76	18.5%	+/-9.3
35 to 64 years	1,651	+/-160	139	+/-56	8.4%	+/-3.3
60 years and over	950	+/-109	46	+/-26	4.8%	+/-2.6
65 years and over	703	+/-97	35	+/-20	5.0%	+/-2.6
SEX						
Male	2,066	+/-212	221	+/-90	10.7%	+/-4.2
Female	1,956	+/-196	261	+/-91	13.3%	+/-4.5
RACE AND HISPANIC OR LATINO ORIGIN						
White alone	3,913	+/-347	479	+/-170	12.2%	+/-4.1
Black or African American alone	0	+/-11	0	+/-11	-	**
American Indian and Alaska Native alone	12	+/-12	3	+/-8	25.0%	+/-55.9
Asian alone	10	+/-16	0	+/-11	0.0%	+/-90.1
Native Hawaiian and Other Pacific Islander alone	0	+/-11	0	+/-11	-	**
Some other race alone	10	+/-16	0	+/-11	0.0%	+/-90.1
Two or more races	77	+/-56	0	+/-11	0.0%	+/-31.1
Hispanic or Latino origin (of any race)	12	+/-16	0	+/-11	0.0%	+/-82.3
White alone, not Hispanic or Latino	3,911	+/-347	479	+/-170	12.2%	+/-4.1
EDUCATIONAL ATTAINMENT						
Population 25 years and over	2,755	+/-219	242	+/-80	8.8%	+/-2.8
Less than high school graduate	399	+/-105	82	+/-38	20.6%	+/-9.7
High school graduate (includes equivalency)	1,249	+/-180	108	+/-51	8.6%	+/-3.9
Some college, associate's degree	658	+/-115	52	+/-31	7.9%	+/-4.7
Bachelor's degree or higher	449	+/-118	0	+/-11	0.0%	+/-6.5
EMPLOYMENT STATUS						
Civilian labor force 16 years and over	1,944	+/-230	178	+/-76	9.2%	+/-3.7
Employed	1,825	+/-206	115	+/-52	6.3%	+/-2.9
Male	1,011	+/-131	58	+/-29	5.7%	+/-2.9
Female	814	+/-118	57	+/-36	7.0%	+/-4.4
Unemployed	119	+/-64	63	+/-54	52.9%	+/-26.6
Male	55	+/-35	25	+/-26	45.5%	+/-33.7
Female	64	+/-40	38	+/-34	59.4%	+/-31.6

Subject	Census Tract 9682, Jackson County, Indiana					
	Total		Below poverty level		Percent below poverty level	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
WORK EXPERIENCE						
Population 16 years and over	3,217	+/-271	333	+/-105	10.4%	+/-3.2
Worked full-time, year-round in the past 12 months	1,314	+/-161	44	+/-25	3.3%	+/-1.9
Worked part-time or part-year in the past 12 months	708	+/-130	111	+/-52	15.7%	+/-7.0
Did not work	1,195	+/-134	178	+/-63	14.9%	+/-5.0
ALL INDIVIDUALS WITH INCOME BELOW THE FOLLOWING POVERTY RATIOS						
50 percent of poverty level	167	+/-113	(X)	(X)	(X)	(X)
125 percent of poverty level	783	+/-222	(X)	(X)	(X)	(X)
150 percent of poverty level	1,010	+/-237	(X)	(X)	(X)	(X)
185 percent of poverty level	1,164	+/-249	(X)	(X)	(X)	(X)
200 percent of poverty level	1,305	+/-255	(X)	(X)	(X)	(X)
300 percent of poverty level	2,023	+/-312	(X)	(X)	(X)	(X)
400 percent of poverty level	2,606	+/-305	(X)	(X)	(X)	(X)
500 percent of poverty level	3,086	+/-342	(X)	(X)	(X)	(X)
UNRELATED INDIVIDUALS FOR WHOM POVERTY STATUS IS DETERMINED						
Male	450	+/-106	137	+/-62	30.4%	+/-10.9
Female	219	+/-69	41	+/-28	18.7%	+/-11.9
	231	+/-71	96	+/-47	41.6%	+/-15.4
15 years	0	+/-11	0	+/-11	-	**
16 to 17 years	9	+/-11	9	+/-11	100.0%	+/-95.0
18 to 24 years	41	+/-50	36	+/-50	87.8%	+/-33.2
25 to 34 years	79	+/-53	20	+/-24	25.3%	+/-30.0
35 to 44 years	68	+/-38	29	+/-22	42.6%	+/-22.5
45 to 54 years	57	+/-36	21	+/-18	36.8%	+/-24.2
55 to 64 years	45	+/-21	2	+/-3	4.4%	+/-7.1
65 to 74 years	47	+/-27	13	+/-15	27.7%	+/-23.6
75 years and over	104	+/-49	7	+/-6	6.7%	+/-6.5
Mean income deficit for unrelated individuals (dollars)	8,358	+/-2,060	(X)	(X)	(X)	(X)
Worked full-time, year-round in the past 12 months	133	+/-59	0	+/-11	0.0%	+/-20.0
Worked less than full-time, year-round in the past 12 months	95	+/-40	47	+/-33	49.5%	+/-23.2
Did not work	222	+/-68	90	+/-42	40.5%	+/-14.7

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

While the 2013-2017 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Explanation of Symbols:

1. An '***' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '****' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

Minority & Low Income Data		
	COC - Jackson County	AC 1 - Census Tract 9682
Total Population	42750	4022
Total White	39319	3913
Total Minority	3431	109
Total Low-Income	6650	482
Percent Minority	8.0%	2.7%
125% of COC	10.0%	10.0%
EJ Population of Concern		NO
Percent Low-Income	15.6%	12.0%
125% of COC	19.4%	19.4%
EJ Population of Concern		NO

County and Census Tract 9682 <https://factfinder.census.gov/>